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PROLIGHT + SOUND 2010
FRANKFURT REVIEW

John Kurlander
Final Cut Special

Fairlight EVO
System Preview

Product Sampler
Microphones

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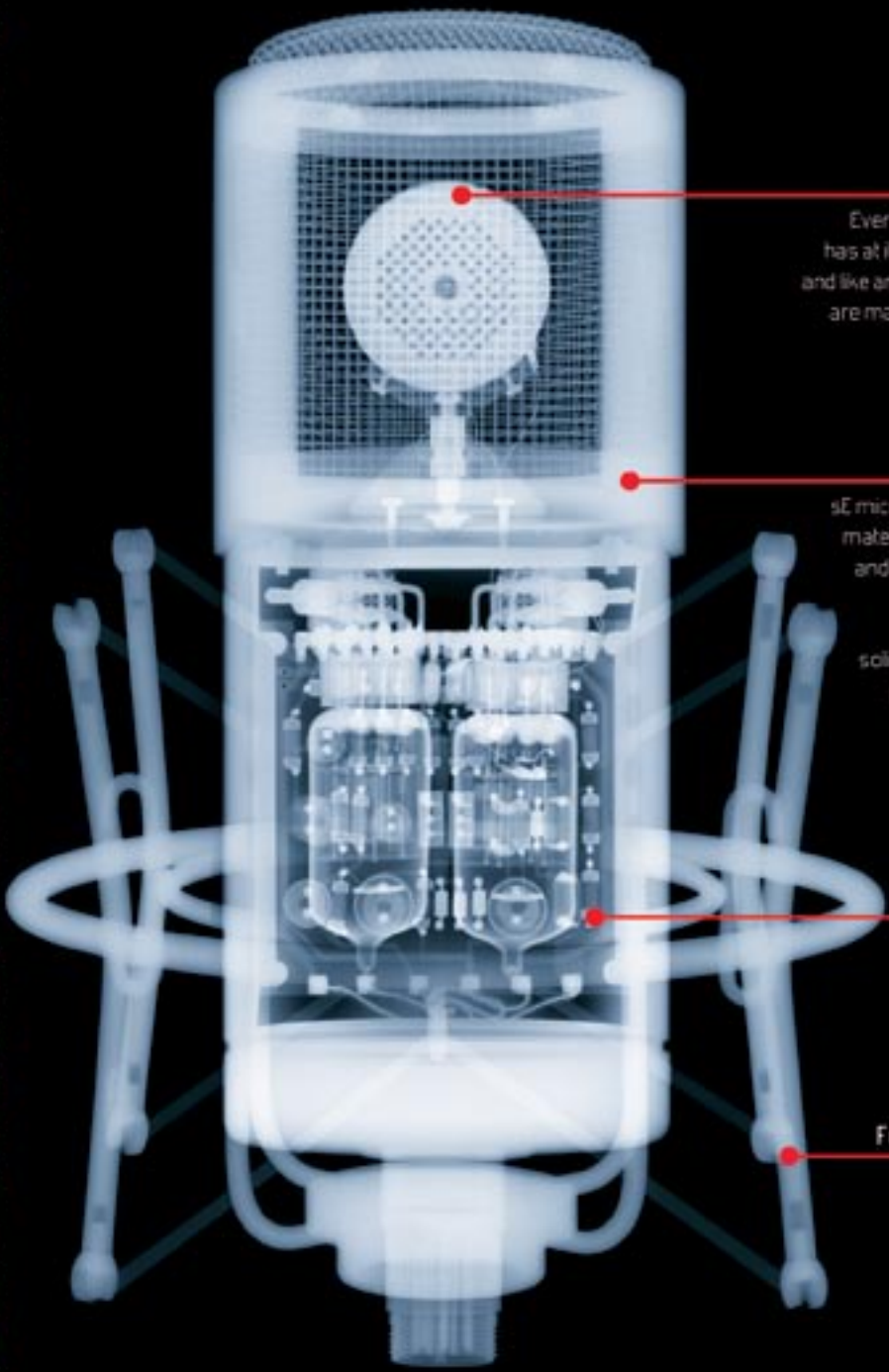

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leader

As ever, the *Frankfurt show* this year (a combination of Prolight + Sound and Musikmesse) was a truly international showcase for new gear and new ideas. The long corridors and expansive halls are notorious for wearing down all but the most resilient souls (and soles), but there is something invigorating about seeing most of the industry's wares in one place. The chance to talk four days away on a subject near to all of our hearts (new stuff), seals the deal for most attendees.

It's true that the dire economy has put pay to the mass gear launches of Frankfurts past, though I still had a number of memorable equipment encounters worth recounting here. For a start, there's the new Schoeps shotgun microphone – the SuperCMIT. I had a short but enlightening demo on this product, which uses an additional capsule and some DSP to attenuate extra-polar activity, way past that which a traditional single capsule and interference tube can hope to achieve.

Also, I sat in on a back-room preview of Steinberg's up and coming Nuendo 5, which has some very welcome and post-friendly additions. Combined with the now-shipping (and Colin Broad-designed) SyncStation, the new version will put to rest any serious-pro-status credibility doubts that might still be lingering around this mature native DAW.

SE Electronics seems unfalteringly bent on world domination, backed up by the announcement that Andy Munro is now onboard. The possibility of some monitors that have been jointly designed by Andy Munro, Rupert Neve, and Siwei Zou hitting the shelves early in 2011 is an enticing one – if a little previous. Of course, most people's monitor buying habits are a lot less whimsical and prolific than their microphone purchasing schedule, but it is still a transducer (one of the only technologies left that uniquely defines the audio industry) with several leading names behind it, and thus is guaranteed a long, hard stare from the pro audio community.

There were plenty of other interesting discussions and new bits – too many to list here, but ample for our show review on page 13. There were also a few reassuringly familiar Frankfurt traditions being kept up, such as the lack of obvious name badges. The dances that some people perform, to try and work out who they've just stopped to talk to, would, on an appropriately contemporary stage, net them a certificate of commendation. Also, the incredible show directory continues to chew up lesser directories that get in its way. It's now so dense that the middle pages recently qualified as a singularity. And for those with the right badges, a press room that Carlsberg can only dream of is a welcome feature.

While several shows are now struggling with a lack of attendees and exhibitors, Frankfurt bounds ever-onwards.

Paul Mac, *Editor*

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NEW USER

Toronto-based DJ and remixer, Deadmau5, otherwise known as Joel Zimmerman, has invested in a Prism Sound Orpheus FireWire recording interface. He particularly likes the driver support for x64 operating systems on both Windows and Mac. "The fact that it only took me two minutes to migrate the same card from PC to Mac made me smile a bit," said Zimmerman. To date he has mostly been using the Orpheus as an A/D converter in the studio, but plans to use it as a D/A for his new live show.
www.prismsound.com

NEW PRODUCT

Milab as released the DC-96C, a side-addressed large membrane microphone. Designed mainly for studio work, but also useful for many live applications.
Like previous DC-96 versions it is cardioid only, and can be used for studio vocals, acoustic guitar and piano, hi-hats, overheads, and guitar amps. The DC096C has a large rectangular condenser capsule, 12dB attenuation pad, and a gold plated XLR-connector. Each microphone is measured independently and is shipped with an individual frequency chart.
www.milabmic.com

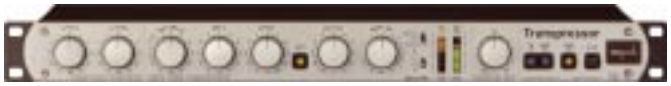
NEW USER

Duality Across The Globe

Installations of Solid State Logic Duality consoles have taken place in two studios on the opposite sides of the world. London's Dean St. Studios has installed a 48-channel SSL Duality console in Studio 1. The famous space – formerly Tony Visconti's Good Earth Studios – was acoustically designed by Eddie Veale, and has been the creative home of David Bowie and T.Rex. The Duality replaces a 24-channel SSL AWS 900+ SE, and has been brought in due to increased client demand for large format sessions.
"Before Duality, we found that sometimes our clients would track with us and mix elsewhere," said Jasmin Lee, co-owner of Dean St. Studios. "Ever since we installed Duality, our clients have been even more eager than ever to complete their projects with us."
Meanwhile in Sao Paulo, Brazil, Studios Gravodic recently upgraded Studio A with a 48-channel Duality console. The studio records some of Brazil's top musical talent, specialising in Sertanejo, Samba, and pop music.
www.solid-state-logic.com

NEW PRODUCTS

Five From SPL



SPL has launched five new products. The M/S Master offers fully adjustable separation of L/R signals into middle and side signals, and a frequency filter for bass and room ambience control. It has stereo width control and inserts for external processors.

The Transpressor is a transient designer and twin core compressor, with the ability to use both modules in any order. It combines level-independent compression and the treatment of transients, and so aims to negate the limitations of each processor presented on its own.
The transient designer shapes the waveform according to the transient. The compressor is based on the SPL's Twin Core Circuit, and includes all standard parameters like threshold, ratio, attack, release, and make-up gain. The attack and release parameters can be adjusted automatically according to the input signal.

Also announced was a new mounting frame, RackPack 4, with a power supply for up to four modules. It comes with a lateral handle and a fitting system for a 19-inch rack. A new RackPack module has also been released, the Dual Band De-Esser. The sound neutral unit offers a phase cancellation technique, and an auto-threshold that keeps processing constant. Finally, the DrumXchanger optimises or replaces drum sounds in a mix and replaces samples phase accurately.
www.spl.info

PRODUCT UPDATE

Spectrasonics has released free updates for Omnisphere and Trillian. Omnisphere v1.2 has full 64-bit cross-platform support and comes with over 200 new Omnisphere patches for over 7,000 total sounds in the factory library. New features include new synthesiser filter algorithms and a new Sample File Server Function, giving the software the ability to go beyond 32-bit memory limits on Mac OSX systems. Trillian v1.2 features many of the same upgrades and now joins Omnisphere and Stylus RMX as fully Mac- and Windows-native 64-bit plug-ins.
www.spectrasonics.net

NEW USER

The Oceanic Preservation Society has made The Cove, a documentary highlighting the suffering and killing of wild dolphins in Taiji, Japan. The crew used Sound Devices recorders to capture the sounds of the dolphins. The 772 and 744T digital audio recorders were set up in harsh conditions, including underwater and outdoors under steep cliffs.
www.sounddevices.com

NEW PRODUCT

Modern Beats has released Pop Anthemz 1, a melodic construction-style loopset that provides 20 multi-track pop music themes including both straight and swing rhythmic phrasing. The pack includes a large variety of radio ready top-40 contemporary and classic pop music themes, with all loops mix-matching seamlessly together.
www.modernbeats.com

NEW PRODUCT

Sonivox has released Eighty Eight Grand Piano, a virtual embodiment of the Steinway CD 327 grand.

Recorded within the same acoustic confines as the Sonivox Symphonic Collection, Eighty Eight features over 11GB of instrument content, with 35 piano and pad presets, and 52 solo piano presets. It also offers 15 adjustable split point multi-instrument combination patches.

www.sonivoxmi.com

NEW PRODUCT

Nine Volt Audio has brought out Metal Guitar: Riffs and Rhythms, designed to bridge the gap between the flexibility of a sampled instrument and the inspiration of using loops. Metal Guitar offers 293 unique patterns recorded at 15 chromatic intervals for a total of 4,395 loops, meaning that there is no need to rely on pitch-shifting.

www.ninevoltaudio.com

NEW PRODUCT

The second instrument developed by Native Instruments in collaboration with Abbey Road has been released, with the introduction of Abbey Road 70s Drums. A Premier and a Ludwig kit were recorded in Studio Two, using classic microphones from the studio's collection, the EMI TG mixing desk, an analogue two-inch tape machine, and other authentic outboard gear.

www.native-instruments.com

PRODUCT UPGRADE

Melodyne editor has now been upgraded. Version 1.1 improves the sound quality, performance, and reliability of the software, optimises functions, and fixes a number of bugs. Updates are also available for Melodyne assistant and Melodyne essential RTAS. RAM requirements are reduced, and improvements made to the processing of monophonic material.

www.celemony.com

NEW PRODUCTS

Triple Threat From sE

sE Electronics has made some exciting announcements. World-leading acoustician Andy Munro will be joining the partnership between sE and Rupert Neve, to head the R&D team for a series of new powered studio monitors from sE.

"In my opinion the monitor market has become overcrowded with products that are simply branding exercises for the companies that make them," said Munro. "After 30 years of designing professional monitors I can reasonably claim to know what makes a speaker system deliver true sound quality." He admits that the primary objectives of low distortion and good dynamics make it a tricky design task, but commented: "It is only by taking a few risks that anything innovative can evolve." The monitors will be released in January 2011 and prices will start from around GB£400.

The company also announced several new microphones. The Gemini 5 uses the same capsule as the Gemini II, but only has one tube. This can be switched out completely to a Solid State only mode, meaning that it can be used either as a Tube condenser or a FET microphone. The G3500 is also derived from the Gemini II, using the same capsule and chassis, but is a FET only version. The Voodoo VR1 and VR2 ribbon microphones achieve full frequency response using a new mechanical device designed by sE CEO Siwei Zou, allowing the traditional ribbon capsule to develop and capture frequencies from 20Hz to 20kHz. The VR2 is an active version of the VR1. Another release is the sERN17 instrument microphone series, developed in partnership with Rupert Neve Designs, which is a pencil condenser with a full-size, hand-wound transformer. A high-end tube microphone will be released shortly after.

A final announcement was that Waves will be giving away a free Tune LT pitch correction plug with every sE microphone and Reflexion filter product shipped during May, June, and July of 2010.

www.seelectronics.com

NEW PRODUCT

Schoeps Shows Super Shotgun

Schoeps has unveiled a new type of digital shotgun microphone with increased directivity, based on the analogue CMIT 5 model. The SuperCMIT uses technology from Illusonic. In addition to the capsule behind the interference tube, it contains a second, rear-facing microphone capsule. Digital signal processing recognises sound energy arriving from various directions and determines whether that sound has a discrete, persistent direction of arrival or not. It uses this information to suppress diffuse sound and to focus on discrete sound. This increases the reach of the microphone, without colouring the sound. At high frequencies only the signal from the front-facing capsule is used, since the interference tube already offers optimal effectiveness in that range. The SuperCMIT has three push buttons that control the filters and presets of the microphone. The filters are identical to the CMIT 5, and there are two preset settings available – moderate directivity increase, and directivity increase.

www.schoeps.de

NEW COLLECTION

Waves Audio has unveiled the Chris Lord-Alge Artist Signature Collection, developed in collaboration with the Grammy-winning mixing engineer. Lord-Alge has been in the business for over 20 years, with mixing credits including U2, Bon Jovi, Pink, Alanis Morissette, Foo Fighters, and Dave Matthews Band. Created from his custom processing chains, the collection gives users access to his sound, with six application specific plug-ins including dedicated tools for bass, drums, effects, vocals, guitars, and acoustic instruments.

www.waves.com

NEW RELEASES

There are two new releases from Toontrack Music. Beatstation is Toontrack's first foray into tonal sampling and gives the user a complete workstation for creating and editing any kind of instrument. Sound sets are designed by dragging and dropping Wav, REX, MP£, and Toontrack library sounds on to the pads of the Beatstation from the Beatstation browser or the user's hard drive. Also new is Songwriters Drumpack, which is a drum MIDI collection with ballad, mid-tempo, half-time, up-tempo, and shuffle styles in full four to eight bar grooves.

www.toontrack.com

Pinewood Shepperton plc has posted its 2009 full year results, and they show that the group has remained resilient in the face of difficult times. The impact of the negotiations between the US studios and the Screen Actors Guild is reflected in slight downturn in revenue, with results of £40.3m compared to £42.9m in 2008. The company posted an operating profit before exceptional items of £7.7m.
www.pinewoodgroup.com

NEW PRODUCT

Fairlight has unveiled the EVO console, a fully self-contained audio production system for video, film and music. The mixing surface offers in-line controls and full-colour displays for every fader. It has a built-in monitoring section capable of producing fully automated mixes in multiple formats simultaneously..
www.fairlightau.com

NEW PRODUCT

Lexicon has introduced the LXP Native Reverb plug-in bundle, a collection of Lexicon's four most popular reverbs. It includes Chamber, Hall, Plate and Room reverb plug-ins, with over 200 studio presets from Lexicon's library of sounds.
www.lexicon.com

NEW USER

Euphonix has announced the installation of the first S5 Fusion into Spain. Fig Tree Studios has installed a 32-fader S5 Fusion in their newly opened post-production facility in Barcelona. Named for the term American film makers use when they are dubbing foreign versions of their films for the European market (French-Italian-German-Spanish), Fig Tree specifically mixes films for the Spanish film industry. "There are two distinct markets in Spain: the first, and largest, is the distribution market of mainly American films which need to be dubbed and mixed into Spanish. The other is the local production market for just mixing," explained Andrew Galletly, owner of Fig Tree Studios. "I sensed that the local producers would welcome a studio which cared for their productions and would not push them out of the room when Disney knocked at the door with their next mega 3D flick!"
www.euphonix.com

NEW USER

LaboFilms in Mexico City has installed a new Meyer Sound system, based on CQ-1 loudspeakers, at LaboDigital. The 30-year-old facility can now provide a THX-certifiefd mixing stage for Mexico's burgeoning film industry. To date, ten full-length films have been made at LaboDigital, including Quinzaine des Realisateurs, which showed at the Cannes film festival; and the Spanish adaptations of *Fantastic Mr Fox* and *Tooth Fairy*. The installed system includes three Meyer Sound CQ-1 loudspeakers in a left-centre-right configuration behind a custom-made projection screen.

Two X-800 subwoofers provide bass power, and the system is completed by a surround system of ten UPJ-1P VariO loudspeakers. "Meyer Sound products do not distort the audio signals, and this characteristic is crucial for high-quality audio mixing for films," commented Carlos Cortes, Manager of LaboFilms.
www.meyersound.com

Grow Your Own Drugs is back for a second series on BBC2, and has once again been post-produced at Prime Focus. The series, which features ethno-botanist James Wong unlocking the medicinal power of plants, is produced by Silver River Productions. The six episodes cover garden herbs, incredible edibles, exotics, petals, trees and shrubs, and wild plants. The audio work was done by Kevin Boyle for Prime Focus, who previously post-produced the first series and the Christmas special.
www.primefocusworld.com

Ascent 142 has completed the audio post on drama *Blood and Oil*, created by writer Guy Hibbert and directed by David Attwood for Tiger Aspect. The drama, shown on BBC2, stars Naomie Harris and Jodhi May, and was filmed in Africa and London. The audio team, Chris Roberts, Wayne Brooks and Allan Sallabank, were invited to pre-production planning sessions, which enabled them to agree priorities on the location sound recording and provided them with advance warning of on-set issues to be corrected in post-production.
www.ascentmedia.co.uk

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2. 22nd-23rd Oct
LIPA Liverpool

3. 29th-30th Oct
University of Westminster London

4. 12-13th Nov
Northbrook / Reigate Surrey

5. 19th-20th Nov
Leeds Met Leeds

6. 26th-27th Nov
Glamorgan Uni Cardiff

7. 3rd-4th Dec
Abertay Dundee

Mic To Master is a series of two day events on recording techniques, mixing and mastering which are designed to give engineers, producers and all other creative audio enthusiasts an opportunity to learn expert tips and tricks of the trade from recording industry professionals. Each day features 'keynote' lectures addressing specific topics, masterclasses with renowned producers and listening sessions where participants can play their own work and discuss techniques to overcome specific problems. There will also be manufacturer sessions highlighting the latest cutting edge technology, practical demonstrations to show how technology can solve problems and forums where participants can fire questions at producers and manufacturing experts.

The first event, at Deep Blue Sound, will feature guest lecturers Tony Platt, Al Stone, Simon Heyworth and Alan O'Connell, all of whom have a wealth of experience in the professional recording industry as producer and/or engineers and have worked with the likes of Jamiroquai, Mystery Jets, Depeche Mode and AC/DC.

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PRODUCT UPGRADE

Radio Assist

NETIA has paired its Workflow Engine with its Radio-Assist 8 suite of digital automation software. Designed to facilitate exchanges between all applications in a broadcast environment, the NETIA Workflow Engine gives users one GUI through which to automate processes in Radio-Assist 8 interface any third-party application. Radio-Assist 8 streamlines the preparation and publication of media, while the Workflow Engine is an open system that choreographs, visually represents, and then executes processes or workflow..

www.netia.com

NEW USER

The France 2 network has equipped its new HD OB van with Clear-Com's Eclipse Median digital matrix intercom system, six IP-enabled V-Series 12-lever user panels, and one V-Series 24-lever panel. The Clear-Com systems were first used on the recent RBS Six Nations Rugby Tournament. Some France 2 operators at the Six Nations used the V-Series panels as a monitoring system for external sources.

www.vitecgroup.com

NEW PRODUCT

Axia Has Clever iQ

Axia has released a new console engineered for either standalone studios or networked applications. The iQ system is a family of console frames with different capabilities. Users start with the eight-fader iQ Main Frame, then add frames with phone controls, programmable routing controls, or more faders as needed. Frames plug into the iQ Core, a fanless, convection-cooled console engine with audio I/O, console CPU, logic, mix engine, power supply, and Ethernet switch. Back-up power with auto-switching is also available. The modular frame design means that users can increase their console's size by up to 24 faders whenever they wish to by simply connecting another frame. Features include three dedicated stereo programme busses, plus a stereo utility bus that can be used for phone calls, off-air recording, or as a fourth programme bus. Every fader has automatic mix-minus, show profiles that instantly recall favourite settings, record mode one-touch recording, and comprehensive talkback.

www.AxiaAudio.com

FACILITY UPGRADE

German television company Norddeutscher Rundfunk has replaced its Ü30 OB van, which has handled the station's classical radio broadcasts with a Lawo mc80 for 13 years. The new Ü30 will be fitted with a Lawo mc²66, as well as a Zirkon. "Norddeutscher Rundfunk's new Ü30 is designed purely for use as a music OB van and, as its predecessor, will be used almost exclusively for classical concerts," said NDR Head of Production and Radio Broadcasting, Peter Dewald. The new van is the largest radio OB van in NDR's outside broadcast fleet, and as well as the two Lawo consoles is equipped with nine DALLIS I/O systems, including four stage boxes, with an additional DALLIS frame assigned to the Zirkon. The mc²66 will be used as a production console, while the Zirkon serves as a broadcast console.

www.lawo.de

NEW PRODUCT

AVT has unveiled its new MAGIC SP2 5.1 to Stereo Downmix System, which provides an automatic downmix of 5.1 surround signals to stereo signals. A new downmix algorithm, developed by the Institute for Rundfunktechnik in Munich, Germany, is a key component of the MAGIC SP2, as it avoids distracting effects, or compensates them effectively. The ITU-R BS.775 downmix standard is also supported.

www.avt-nbg.de

NEW USER

DPA's Portuguese distributor Avantgarde has supplied a 5100 mobile surround microphone and ten 4017-R shotgun mics with Rycote weather protection to Radio e Televisao Portugal, to be used at the Dragon Stadium in Port on the UEFA Champions League Porto vs Chelsea football match. The match was broadcast internationally in 5.1 and HD, with the DPA 5100 providing the basic 5.1 sound.

www.dpamicrophones.com

A Legend In His Own Time

Dirk Brauner has been perfecting the art of microphones for over a decade. Hand crafted in Germany with a passion, it's no wonder Brauner mics are coveted by the world's most famous studios and producers.
For artists that deserve the best, Brauner is the only choice. Now Brauner offers a range of mics to suit a wide variety of budgets, all with the legendary sound that has made Brauner a name synonymous with quality.

"Dirk's microphones are open, natural and inspiring just like the man himself. "
Peter Gabriel
" Never before did I come across a microphone of this caliber. The VMA is the best microphone I have ever worked with. "
Elliot Scheiner : Steely Dan, Toto, Van Morrison, Fleetwood Mac, Sting, ...
" I got a call from a friend of mine who was working on a Janet Jackson mix that we had recorded vocals on and the producer, Rodney Jerkins, kept asking about the vocal sound, what mic we used, if it was a vintage mic. I had to smile when I told him it was not a vintage mic but a Brauner VMA! I LOVE my mic! "
John Horesco IV: Jermaine Dupri, Janet Jackson, Usher, Mariah Carey, ...

In the UK:
The Home Service
T: 020 8943 4949
E: sales@louisaustin.com

theartofmicrophones.com

brauner. microphones

back from audio engineers worldwide, we would very much like to thank: Jens, Rudi,
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wig, Huub, Tony, Manuel, Carlos, Eric, Olav,
z, Francis, Sven, Istvan, Wilhelm, Benjamin.

ired by your needs – the mc²66 MKII.

www.lawo.de

xperience the mc²66 MKII live at the NAB 2010
as Vegas, April 12–15, Central Hall, Booth C2217

Networking Audio Systems

LAWO

NEW PRODUCT

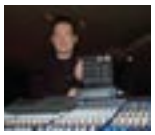
DPA has expanded its 4099 clip mic range, with the addition of the 4099B and 4099C, with mounting accessories designed specifically for bass and cello respectively. Both clips can be mounted on the outer strings of the instrument, past the bridge, opening up new possibilities for performers who are sharing the stage with a loud rock band.

www.dpamicrophones.com

Harry Connick Jr has begun touring with a Midas PRO6. Production manager Ted Jonas has been working with Connick since 1995, when he started as the artist's monitor engineer. "I'm an old school analogue guy… We had no desire to go digital until we got our hands on the PRO6."

www.midasconsoles.com

Audient's Black Series is being used on the German tour of *Jesus Christ Superstar*. "The artists are a mixture of classical and musical singers, so the dynamics on the mix bus are a challenge," explained Technical Musical Director René Reinhardt. "When we tried the BB4 on the master bus switching the bypass, we were amazed."



www.audient.co.uk

NEW PRODUCT

Smaller Soundcraft

Soundcraft has launched the Vi1, a smaller, lower-priced version of the Vi digital desk. It is a complete standalone console package with 32 channels of analogue input to 27 analogue outputs, plus digital inputs, four Stereo FX returns, and six digital outputs in one chassis. Input to mix capacity is 46 channels, but by adding a stagebox, simultaneous channel count increases to 64. Channels are routable to 24 multi-function busses, plus LR and mono mix busses. Up to eight of the busses can be configured as Matrix mixes, each with up to 16 sources. The surface, which is just over a metre wide, and includes 16 motorised channel faders with fixed and user-definable layers, eight output/VCA faders, and two master faders. The console features a widescreen Vistonics interface, which displays all parameters for 16 channels side by side on the screen.

www.soundcraft.com

NEW PRODUCT

DiGiCo Brings Out SD9

DiGiCo has brought out the SD9, a complete integrated system that includes the mixing surface, a D-Rack digital stage interface and CAT5E digital multi-core, with the additional ability to simultaneously record 56 channels direct to multi-track software or a DAW. The work surface features a large full-colour digital TFT LCD touch-sensitive screen, 24 full-length motorised faders with touch-sensitive fader caps, high resolution bar graph meters, quick access encoders and buttons, plus user-defined RGB backlit LCD scribble strips.

Featuring third generation Stealth Digital Processing software, its Super FGPA technology incorporates floating point processing. The new D-Rack, which is an integral part of the SD9 system and connected to the work surface by a digital CAT5E cable, has 32 microphone inputs, eight line outputs, and eight modular outputs that can be selected as either analogue or AES.

www.digico.biz

NEW PRODUCT

Blue has launched its new series of live microphones. The enCORE 100, 200, 300, and 100i models are designed for any live application from the smallest space to a stadium or auditorium. The enCORE 100 is a studio-grade dynamic microphone featuring Blue's custom-tuned dynamic capsule. The enCORE 200 adds Blue's Active Dynamic circuitry and output transformer. The enCORE 300 is the flagship of the series and features a hand-selected condenser capsule with a matched pre-amp and phantom power circuit.

www.bluemic.com

NEW PRODUCT

Sonodyne has released the EIDOS speaker range. Currently there are four models with plans for there to eventually be seven, equipped respectively with 10, 12, and 15-inch speakers, and a subwoofer with twin 15-inch speakers. The speakers are aimed at permanent installations, but lines of all the cabinets enable them to also be used as stage monitors. The wide-range models are two-way units fitted with a passive crossover manufactured with coils with very low resistance and metallised polypropylene capacitors.

www.outline.it

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Prolight+Sound 2010 Show Report

Despite general economic anxiety, this year's ProLight+Sound and Musikmesse shows in Frankfurt were as busy as ever, with enough product launches to keep everyone happy. We bring you a highlights from the show floor...

ADAM launched its AX Series of monitors, a new version of the A Series monitors. The ART tweeter is replaced by the X-ART tweeter, which features a higher efficiency and maximum sound pressure level as well as a frequency response up to 50kHz. All woofers and amplifiers have been re-engineered from scratch.
www.adam-audio.com

Allen & Heath introduced the iDR-16 3U MixRack and iLive-R72 rack-mountable control surface, which connect using Allen & Heath's proprietary Audio Control Ethernet link. They also announced a collaboration with Audinate, to introduce Dante networking modules for the iLive digital mixing series.
www.allen-heath.co.uk

AKG unveiled its digital automatic microphone mixer, the DMM 4/2/4, a studio version of the DMM 4/2/2; as well as its Perception Live series of microphones. The P2, P4 and P3S are all cardioid dynamic instrument microphones. The P5 is a super-cardioid microphone for solo vocals.
www.akg.com

Audient launched the ASP2802, an eight-channel console combining analogue features with extensive DAW integration and control. The console uses Audient's Dual Layer Technology, and fully intergrates with the computer system, enabling the user to switch between the analogue layer and the DAW layer.
www.audient.com

Aviom introduced its Pro64 Network Manager PC application, aimed at users who desire centralised control and status monitoring. The device gives remote control of every Pro64 device in a network.
www.aviom.com

Beyerdynamic expanded the range of microphone units for the MCS-Digital wired conferencing system with the introduction of integrated units featuring Revoluto technology, which removes the need for gooseneck microphones.
www.beyerdynamic.de

Blue Microphones showed the enCORE series of studio-grade handheld live microphones, including the 100i instrument microphone. Also on the stand was the Yeti USB THX-certified condenser microphone and the second generation Mikey portable recorder for iPod and iPhone.
www.bluemic.com

From **BSS Audio** there was the Soundweb London BLE-100, a digital signal processor with a fixed configuration of 12 inputs and eight outputs, configurable signal processing, logic processing and a fault tolerant digital audio bus.
www.bssaudio.com

Cadac launched the SAM2 control system, an updated version of its Show Automation Manager. It also showcased the final production LIVE1 budget console, and the ME2, a dual channel mic pre-amplifier mixer and EQ with analogue and digital I/O.
www.cadac-sound.com

D&M exhibited the DN-F300, a 1U/HE rackmount media player for the playback of MP3 and uncompressed .WAV music libraries stored on SD and SDHC flashcards, portable USB flash drives and self powered HDDs. Also on the stand was the DN-F400, a compact half-rack size SD and SDHC flashcard player.
www.d-mpro.com

Dangerous Music introduced the Dangerous Bax EQ, a mastering and mix bus shelving EQ inspired by the classic Baxandall shelving curves of the 60s and 70s.
www.dangerousmusic.com

dbx introduced the Media Engine for SC Digital Matrix Processors, which comprises a DSP card and 1 GB of flash storage. This allows storage of media files on the SC device itself for subsequent routing and playback.
www.dbxpro.com

DPA expanded its 4099 clip microphone range with the 4099B and 4099C, with mounting accessories designed for bass and cello respectively.
www.dpamicrophones.com

Duran Audio launched the AXYS range of Beam Shaping Subwoofers. The speakers are self-powered and come complete with built-in DSP, which provides the ability to process each driver in a bass array individually and have the maximum possible control over the behaviour of the bass array.
www.duran-audio.com

Dynaudio launched the BM 5A MKII, a re-engineered version of the BM 5A. The woofer offers longer excursions so stays linear for longer, resulting in a cleaner, tighter bass response. At the top end there is a high-resolution soft dome tweeter.
www.dynaudio.com

Focal launched the CMS40, an ultra-compact studio monitor that is suitable for broadcast and post-production. Equipped with an aluminium and magnesium inverted dome tweeter, the CMS40 also integrates a 4-inch Focal woofer.
www.focalprofessional.com

Focusrite announced the ISA One Digital, a version of the ISA One mic preamp/DI that ships as standard with on-board analogue-to-digital conversion.
www.focusrite.com

JBL released its Constant Beamwidth Technology (CBT) Calculator 1.00 software; and Line Array Calculater II software for VERTEC, a stand-alone application for use with JBL line array systems. It also showed the DPDA input module with BSS Omnidrive HD signal processing onboard, for use with all JBL DrivePack-equipped powered speaker systems.
www.jbl.com

Over at **L-Acoustics** there was the new KARA modular line source system, with a design inspired by the K1 stadium system. introduced at the same time was the complementary SB18 subwoofer for reinforced LF contour applications. L-Acoustics also launched the LA-AES3 AES EBU input card for full digital signal chain.
www.l-acoustics.com

Lexicon launched the Omega Studio Desktop Recording bundle, the LXP native reverb plug-in bundle and the PCM92 stereo reverb/effects processor. The PCM92 delivers new capabilities to traditional reverbs by adding multimode filters in the audio flow.
www.lexicon.com

Mic W showcased the HN151 handheld cardioid microphone with pressure gradient capsule; the BN 151 desktop cardioid microphone for use in applications where very clear vocal pickup is required; the E436 miniature omni-directional condenser clip-on; and the BE426 boundary layer microphone.
www.mic-w.com

Neutrik released XIRIUM, the first product based on DIWA (Digital Wireless Audio) technology, which will deal with the restrictions of available radio frequencies

for audio-data transmissions. It combines digital receiving and sending lines in one system. They also showed the opticalCON system and power monitor.
www.neutrik.co.uk

Outline unveiled its EIDOS series of speakers. Aimed at permanent installations, they can also be used as stage monitors. They also showed the Mini-COM.P.A.S.S, which now incorporates i-Mode technology making it controllable via Web applications; and the LAB 21 HS SP, the self-powered version of the LAB 21 infra-sub.
www.outline.it

Presonus showed the 24.4.2 digital mixer. Designed for both studio recording and live sound, the mixer provides 24 input channels and serves as a dual-port FireWire audio interface.
www.presonus.com

QSC unveiled the KW Series of loudspeakers, a smaller and lighter version of the K Series wood enclosure speakers. There are four models, each with a 1000 watt class D power module, and a high-output 1.75-inch HF device.
www.qscaudio.com

Quested revealed its SBC800 low frequency management system, which improves the low frequency response of any music or film reference monitoring system. Control of gain and phase on LCR and LFE sections is adjustable independently and there are two bands of equalisation.
www.quested.com

Riedel announced a technology partnership with DiGiCo, and also revealed the new RockNet RN.335.DI digital input interface, which provides eight digital inputs via AES. Also unveiled was the RockNet 100 RN.102. IO module which offers 16 line outputs and eight microphone/line inuts; and the RockNet RN.343.VI expansion card for Soundcraft Studer digital mixing consoles.
www.riedel.net

Schoeps showcased the SuperCMIT digital shotgun microphone, which has two transducers and uses digital signal processing algorithms from Illusonic. Based on the analogue CMIT 5, the microphone has greatly increased directivity.
www.schoeps.de

sE announced a collaboration with Andy Munro which will result in a series of powered studio monitors. They also had several microphone announcements, with the introduction of the Gemini 5, G3500 and the Voodoo VR1 and VR2 ribbon microphones, in addition to the limited edition Gemini III and the sERN17 instrument microphone series.
www.seelectronics.com

SSL announced the release of Soundscape V6, a high performance DAW for mission critical applications such as live recording, broadcast and restoration. They also showcased X-Patch, the new software controlled analogue patch system.
www.solid-state-logic.com

Sonodyne showed the SM200Ak two-way active mid-field monitor. They also showed the SLF210 remote controlled powered subwoofer; the SMac50, a varient of the SM50Ak aimed at those looking for a near-field monitoring solution for the MacBook Pro; and the BMC 205 DSP Bass management unit.
www.sonodyne.com

At **Soundcraft** there was the V3.0 software for its Si Series consoles, offering increased DSP channels, 1/O patching and improved layering of the control surface faders. They also released the Vi1 console, a smaller, more affordable model joining the Vi digital console series.
www.soundcraft.com

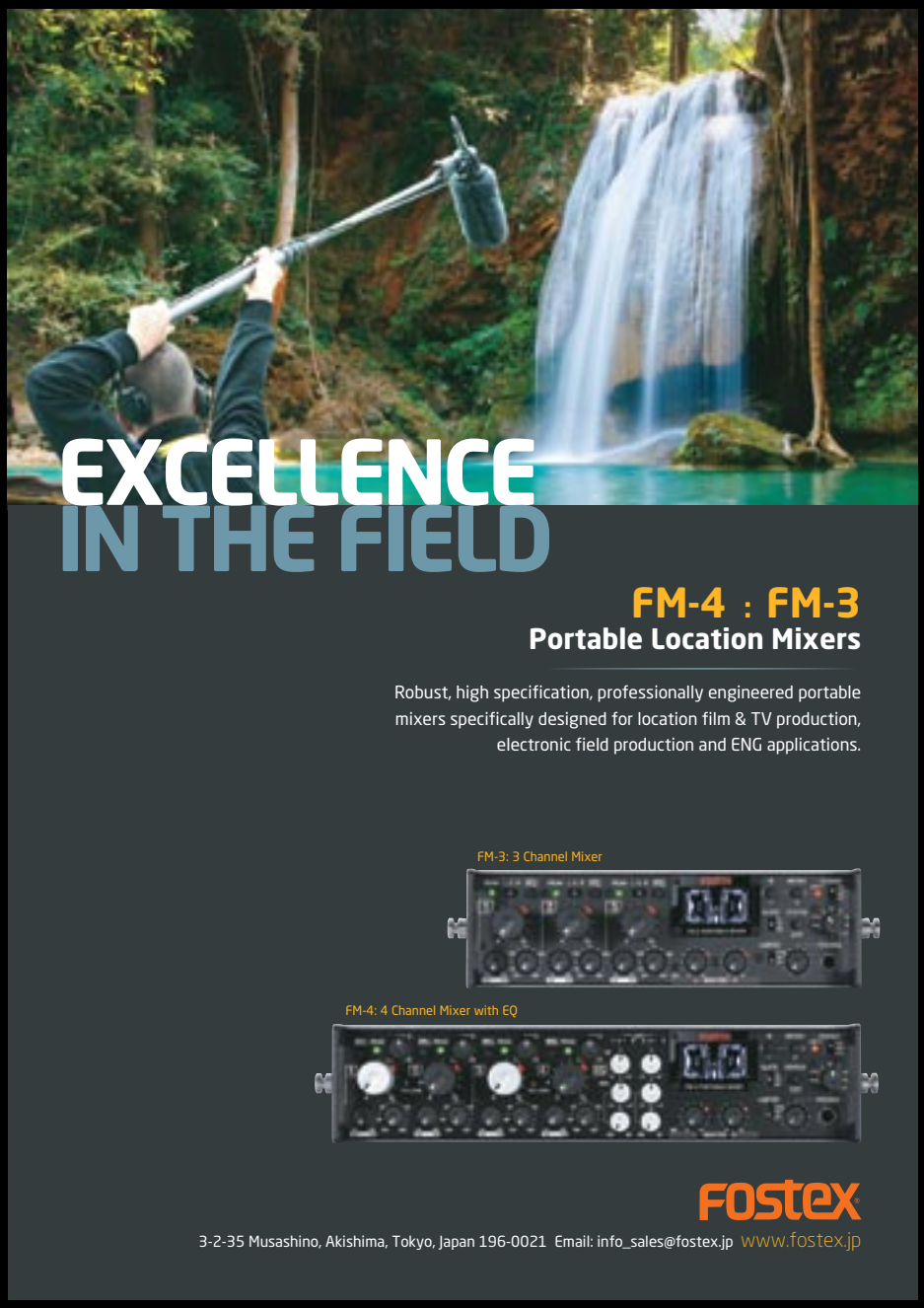
Tascam had several new products to show, with the DR-680 eight-channel portable recorder; the US-800 mobile eight-channel USB 2.0 audio interface; the HS-2 and HS-8 high resolution solid state recorders; the MH-8 eight-channel headphones amp; and the LM-8ST rackmount line mixer.
www.tascam.com

TC Electronic showed the BG500 bass amp, which shares many features with the RH450, including the TubeTone effect and SpectraComp 'per string' multi-band compression.
www.tcelectronic.com

Tomo Audiolabs brought the LISA dynamic mastering equaliser, with integrated dynamics section.
www.tomo-audiolabs.com

Turbosound introduced the Milan MI4 digitally self-powered 15-inch two-way loudspeaker and matching Mmilan MI8 18-inch 1kW digitally powered subwooder. They also launched the multi-purpose Compact loudspeaker range, and the four-channel Class D RACK-DP50 with USB or network-controlled DSP processing platform.
www.turbosound.com

UMAN presented the UNOS platform-independent network operating system. Devices obtain a streaming interface and a graphic user interface. The UNOS core uses an open standard as a high level protocol and supports many current as well as future network standards.
www.umannet.com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Technology Under Review

KEVIN HILTON discovers what the Technology Strategy at the BBC actually means for the broadcaster.

British newspapers love a good juicy story involving the BBC. If it's about editorial failings, overspending, perceived bias, or the inflated salaries of presenters and executives, all the better. Reports on proposed restructuring of the organisation and services, and how the Licence Fee is spent, come in a close second.

So the press was in paroxysms of joy and fury in equal measure when the BBC Trust, the broadcasters governing body, published a strategy review at the beginning of March. In this Director-General Mark Thompson has set out a long list of proposals and analysis for the future of the BBC.

The media, however, focused on three controversial suggestions; to close the digital radio stations 6Music and the Asian Network, and reduce by half the BBC's web presence. This resulted in acres of newsprint, with either commentators saying this was "a good thing" because no one listened to digital radio anyway; or presenters from the channels concerned and musicians arguing how it would be "a bad thing" because there would be no outlet for new music or specific platform for a large community. The public rallied round, with the inevitable Facebook campaign swinging into action.

The frenzy surrounding this review was stoked by leaks to the press the week before publication. By contrast another major BBC policy document was introduced with almost no publicity. Reaction to the Technology Strategy seems to have been limited to postings on the BBC website, strange because the main business of broadcasting – getting programmes to the audience – is now more linked to new technologies than ever before.

> "Over the past 10 to 15 years the BBC has moved from its famous historical position of using equipment designed in-house by talented but sometimes eccentric engineers. There is more off-the-shelf gear in use today..."

A Central Position

The Technology Strategy acknowledges this: "Technology is central to much of what the BBC does and this is becoming increasingly so right across the BBC... The move towards digital content and file-based media is leading to significant demand

"I am amazed at the detail that the Sonodyne SM 50Ak's give me. I really can trust them and they sound so full and smooth for such a compact monitor"
James Saunders, The Jungle Group, London
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on the BBC's IP-based networks." The conclusion is that broadcasting is no longer just about terrestrial transmission and traditional engineering principles, but a whole world of new media forms of distribution and reception, in which the BBC is competing with the likes of Google, Microsoft, and Facebook.

Tech Chief

This is reflected in the background of the BBC's Chief Technology Officer. John Linwood joined the Corporation in April 2009 from Yahoo, where he had been Senior Vice President of International Engineering. Prior to that he had worked at Microsoft, Omega Software, and The Dodge Group. "What the BBC is doing today is not about analogue broadcasting," he says. "There is a move to IP operation and into the software world, which is my background and why I was appointed."

There are two primary elements to the Technology Strategy: business requirements and a series of common principles for how work is done in all technology areas. The former cover collaboration and sharing technologies within and outside the BBC, having core business systems and services, securing data management, promoting R&D, and employing flexible, adaptable ways of operation.

One Of Many

Central to this is the BBC's move to tapeless production but Linwood says the Technology Strategy is about more than that. "It's one of many elements," he explains. "There are content acquisition, delivery, and IT networks to consider as well. The key message is that technology is an increasing part of what the BBC does and so we need to help senior management understand how we use technology and how that supports our overall business."

> "In the strategy review Mark Thompson recommended that the BBC should do "fewer things better", rather than trying to do everything."

Linwood says the BBC uses a "vast amount of technology" and needs a "holistic view" of it. Over the past 10 to 15 years the BBC has moved from its famous historical position of using equipment designed in-house by talented but sometimes eccentric engineers. There is more off-the-shelf gear in use today, a lot of which is developed or supplied by third party partners, including Siemens, which still has five years of its contract with the BBC left to run.

If the BBC needs something that is not commercially available, then, Linwood says, the BBC R&D department will design it. Despite the move towards a more IT way of working, good old broadcast engineering skills have not been discarded. "Certain engineering principles still apply," Linwood comments. "And we can apply these to using streams over IP and codecs and how we are moving from dedicated hardware to software."

A Helping Hand

Linwood observes that how audio is treated is also helped by the older techniques. "There are basics like not getting background noise from lighting on a recording," he explains. In general, he says, there is a move towards embedded audio, with discrete channels for surround sound being looked into now. "5.1 will be the norm for some things," he adds, "like music and sport but perhaps not for news. It's all about adding value where appropriate."

In the strategy review Mark Thompson recommended that the BBC should do "fewer things better", rather than trying to do everything. "Our review was done with the full knowledge of the whole BBC and is fully in line with the overall thinking," says Linwood. "The amount of technology used within the BBC is increasing. Mark talks about 90p in the pound for content production and delivery, and large amounts of those are technology-based. What is being spent on technology is increasing and there is certainly no talk of cutting that."

The Future...

The Technology Review has been officially endorsed by the BBC Trust and was published in full during January. How many of the BBC's services will be left to be carried by all the technologies available to it after the strategy review is finally approved remains to be seen.

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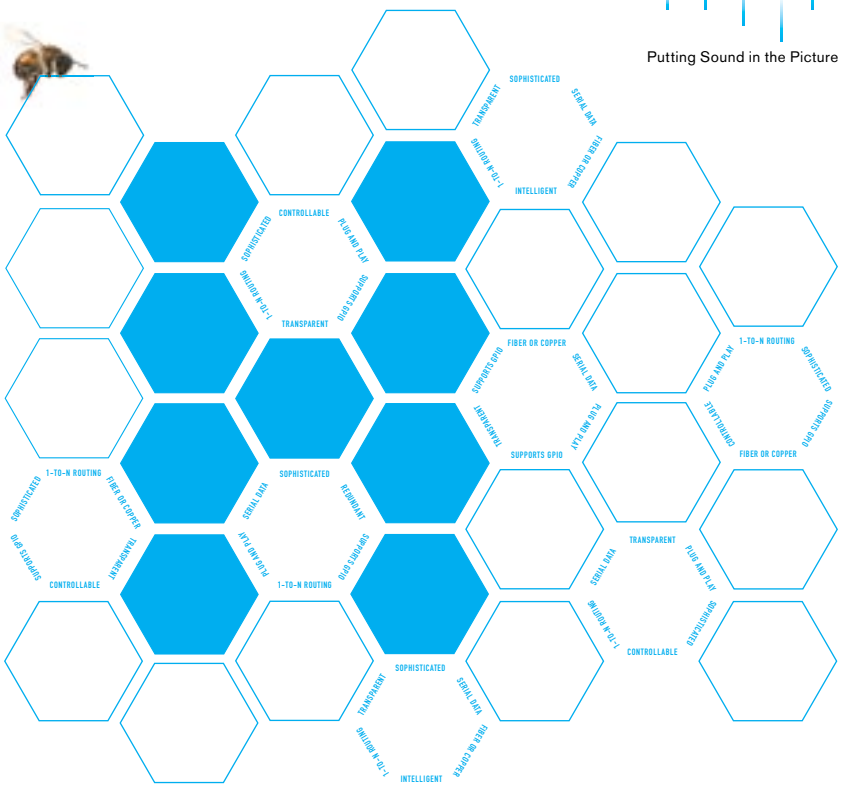

Hydra2 forms the routing backbone for both the Apollo and Artemis consoles.

These desks are just one type of client capable interfacing with Hydra2, which provides an enormous 8192² synchronous router at its core. A range of I/O boxes can be connected via high density 512 bi-directional copper or fiber connections, while mini-GBIC connectors keeps connections simple and installation easy.

Highly scalable, Hydra2's router is a TDM-type router, capable of 'one-to-many' routing and truly point-to-point. This allows for enormous networks with highly flexible topologies involving multiple routers, inputs/outputs, control rooms and studios. And with adaptive, intelligent software which automatically recognizes changes to the network and updates all its clients, it's also a very social network.

Hydra2. Minimizing installation overheads and maximizing audio routing flexibility.

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calrec.com

HYDRA2

MEDIA MATTERS

Broadcasting in Spain has witnessed a spectacular expansion in recent years with the emergence of new commercial operators and the launch of digital services. The cable and satellite TV markets are growing steadily and a free-to-air digital terrestrial TV (DTT) service was re-launched in late 2005. Spain aims to switch off the analogue TV signal by the end of this year.

Home-produced dramas, reality shows, and long-running 'telenovelas' are staple fare on primetime TV.

Public radio and TV are run by RadioTelevision Espanola (RTVE), which is funded by advertising and state subsidies. As well as public and commercial national TV networks, there are 13 regional stations backed by regional governments and many local stations.

Multi-channel TV is offered by the satellite platform Digital Plus.

In spite of the proliferation of print and broadcast media, and their diverse political stances, concerns have been raised about political influence in the media, and particularly in public broadcasting.

VITAL STATISTICS

FULL NAME	Kingdom of Spain
CAPITAL	Canberra
MAJOR LANGUAGES	Spanish (Castilian), Catalan and its variant Valencian, Gallego (Galician), Euskera (Basque)
MONETARY UNIT	1 euro = 100 cent
MAIN EXPORTS	Transport equipment, agricultural products
GNI PER CAPITA	US $31,960 (World Bank, 2008)
INTERNET DOMAIN	.es (.cat for Catalonia)
INTERNATIONAL DIALLING CODE	+34

Meyer M'elodie Blends into Madrid Theatre

Madrid's Teatros del Canal now features Meyer Sound's self-powered M1D and M'elodie line array loudspeaker systems

The Teatros del Canal, a new multi-purpose performing arts complex in downtown Madrid, marks another triumph for renowned Spanish architect Juan Navarro Baldeweg. The bold exterior statement of angular glass and stone carries over into the interior, where visual aesthetics are complemented in the aural domain by the performance of Meyer Sound's self-powered M1D and M'elodie line array loudspeaker systems in the Main Theatre and the black-box Theatre Configurable.

According to Ramon Pérez of RPS Broadcasting, the consultant on audiovisual technologies for the project, initial plans for all-Meyer Sound systems had been sketched before he was contracted as the audiovisual consultant, and he quickly concurred. "I've worked with Meyer systems in the past, and I've been impressed by the excellent size/weight-to-power ratio, the precise directivity, and the phase coherence between cabinets in an array.

"The architects wanted the main arrays hidden inside structures covered with acoustical foam," continues Pérez. "Meyer Sound Spain's design services department found that M'elodies would fit the space. I looked at the predictions in MAPP Online Pro and knew that this approach would work."

The Main Theatre's sound system includes 14 M'elodie line array loudspeakers, four floor-mounted 650-P subwoofers, a centre cluster of eight M1D line array loudspeakers, and eight UPM-1P loudspeakers for front-fill and under-balcony-fill.

In the Theatre Configurable, a free-form performance space, a versatile solution provides a number of design options for various events and seating arrangements. "We have 32 M1D cabinets available, which can be configured as left-centre-right front arrays if that is desired," notes Pérez, "or they can be broken into as many as eight mini-arrays for placing 360 degrees around the overhead catwalk." Four M1D-Sub subwoofers reinforce the low end, while additional flexibility for music and effects is afforded by free placement of six UPJ-1P VariO and six UPM-1P loudspeakers.

Meyer Sound's Galileo loudspeaker management system is used for drive and processing in both venues. Each control booth has its own pair of HD-1 studio monitors, and each stage is equipped with six UM-1P stage monitors. Final tuning was accomplished with a SIM 3 audio analyser. Installation contractor for both systems was BGL S.L.

Seesound Adds XTA and Optocore

XTA Electronics has announced the appointment of Seesound as its new distributor for Spain. Barcelona-based SeeSound is headed up by CEO Nacho Alberdi, who formed the company in 2004. Today it is the exclusive distributor for many of the top pro audio brands. Alberdi, who has more than 20 years of experience in the pro audio industry, is supported by a highly motivated and experienced team offering a broad range of expertise in sales, marketing, and technical support.

Nacho Alberdi comments, "XTA is a key factor in our catalogue because we consider they are the best at doing what they do, and that is being the control part of any pro audio system."

Speaking for XTA, Sales & Marketing Director, Bill Woods adds, "XTA is delighted to be working with SeeSound whose other lines truly complement our existing product offering. I am very pleased to be working with Nacho and his excellent team who already have a number of nice sales under their belts."

Also joining the SeeSound portfolio is Optocore. The agreement was confirmed at last year's PLASA Show in London, where Optocore launched its new SANE (Synchronous Audio Networking plus Ethernet) protocol to the world's professional audio market.

Nacho Alberdi not only has extensive knowledge of the Optocore system, having distributed its fibre products back

in 2001 as part of AlberdiPro, but has also worked closely with Optocore's recently appointed International Sales Manager, Mike Case, over the years.

"Having proved to be the industry leader in audio transport through fibre, with the upgrade of the Optocore system, and the ability to be linked to the new SANE system, we are delighted to be working with the brand again," said Nacho Alberdi.

"Optocore is well known in Spain, and SANE is clearly destined to be a big success in the installation market as well as the live market. It cuts down the cost to very affordable prices, leaving an open door for future expansion of the installation. The beauty of SANE is that it shares the same technology and can be linked to the fibre Optocore system."

Mike Case added: "SeeSound's technical expertise and knowledge of our market segments means the choice was an easy one to make."

Teatro Campoamor Adopts Soundcraft Vi4

Soundcraft's Spanish distributor, Earpro, has underlined the continuing success of the manufacturer's Vi series digital desks, with the recent installation of a Vi4 at El Teatro Campoamor in Oviedo.

Roberto Alonso, Technical Manager of the 120-year-old venue, believes it is easy to pinpoint the success of Soundcraft digital audio mixers. "The Vi4 is very user-friendly," he states. "After 20 years using an analogue mixer, the transition has been an easy one to make. In very little time sound engineers can gain the same confidence they had when using any traditional mixer."

He continues, "There are certain applications where a particular technology or platform can be more suitable than another. In our case, the improvement in audio quality has been noticeable right across our programme of events. Due to the varied nature of our theatre programme many different technicians will mix shows through our sound system – and generally the opinions have been entirely positive. Our Vi4 has already been used in operas, zarzuelas, ballets, and all types of event."

Alonso also highlights the importance of the integrated dynamics and effects processors within the consoles. "Thanks to the console's quality and large provision of dynamics processing, we have been able to get rid of our external rack and cabling entirely, so now we have a much cleaner and more comfortable workspace."

Alejandro Sanz in Paradise with AKG

As one of the most successful musicians in Latin America, Alejandro Sanz has built a name for himself as a dynamic and exciting performer; selling over 25m albums worldwide and winning 17 Grammys. With his new project Paraiso Express on the verge of release, Sanz recently embarked on his worldwide Paradise tour, showcasing the anticipated album with a set of AKG equipment that included the DMS 700, an IVM 4 in-ear system and a variety of D7 and D5 microphones.

Spanish distributor Neotecnica supplied the tour with the AKG equipment. Each and every concert will be using 24 different DMS 700 channels for voices and instruments and will also use 16 channels of the IVM4 in ear-system. For vocals, the DMT 700 will be equipped with D7 and D5 handheld capsules that prove to be the best solution for adapting to Sanz' vocal style.

"After speaking with Alejandro's tour manager and getting the details of the music and the type of venues he would be playing, we knew that AKG would be the best solution," said Perdo Medina, Neotecnica, Spain. "The DMS 700 is flexible enough to handle a wide array of channels, the IVM 4 is one of the most secure in-ear systems on the market, and the D7 and D5 are advanced enough to handle even the most complex audio transmissions."

Hesperia Tower Installs Bosch System

The 280-room, five-star Hesperia Tower in Barcelona is one of the Hesperia chain's flagship hotels and its most iconic and innovative project. Its 5000sq.m conference and convention centre is divided into 21 meeting rooms, with a total capacity of 2,500 people. For the convention centre's auditorium, which seats up to 480 people, a multi-language simultaneous interpretation system was required, to enable all participants to interact in conferences without any interference.

The Bosch DCN Next Generation Conference System together with the Integrus Digital Infrared Language Distribution System was proposed, accepted, and installed by local dealer Mediacom '95. Microphone connectors were installed in the auditorium's seats, with one microphone for every two participants. In addition to these 250 microphones, the Integrus system was installed so that conferences could be followed in the participant's chosen language.

The system is completely free from interference from devices such as cell phones, radios, and lighting systems, and offers HiFi sound quality.

KME Opens Demonstration Auditorium

Following extensive investment, a 170sq.m auditorium has been opened at the headquarters of loudspeaker manufacturer KME in Klingenthal. An audio competence centre with optimised, lively acoustics has been created to present KME systems under live conditions, the company says.

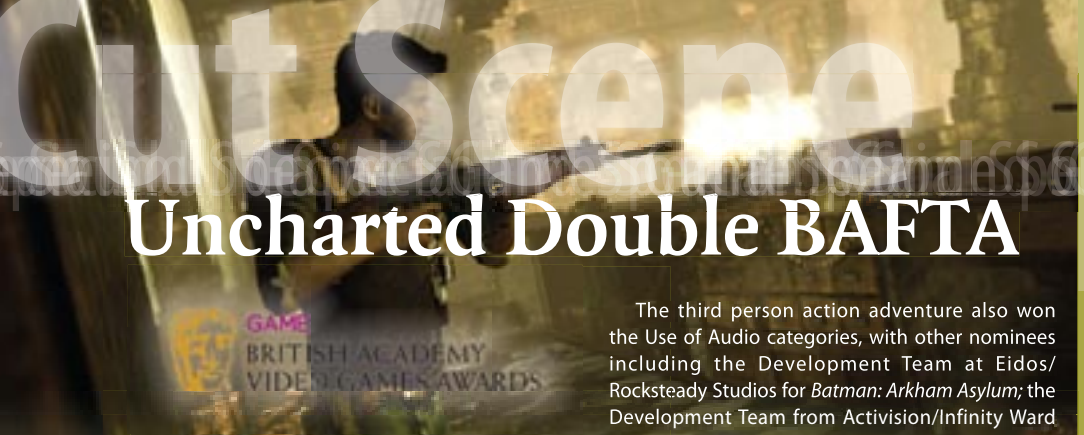
The building includes a functional acoustic structure with symmetrical room design, with frequency neutral reverberation time delivering a natural listening experience. The space allows the company to demonstrate not only the acoustic properties of the systems, but also hardware features like rigging and mounting options.

Modern electronic and media infrastructures are also installed. An extensive audio-video production delivers a comfortable control of all elements. Heavy load mounting point with ChainMaster D8Plus chain hoists and FD34 truss allow the mounting of bigger systems, such as KME's Pano line array, with up to 500kg per side. The room can also be dimmed automatically.

In the neighbouring anechoic chamber, which offers a measurement distance of up to 7.5m, extensive acoustic source testing can be carried out with the focus on directivity, frequency, and phase response.

The company plans to run training programmes, workshops, and product demonstrations for KME dealers and end users in the building in the future.

Uncharted Double BAFTA



The GAME British Academy Video Games Awards took place on Friday 19 March. There are two directly audio-related awards among the categories; Original Score and Use of Audio. The Original Score nominees were Jesper Kyd for Assassin's Creed II; Ron Fish and Nick Arundel for *Batman: Arkham Asylum*; Hans Zommer and Lorne Balfe for *Call of Duty: Modern Warfare 2*; James Hannigan for *Harry Potter and the Half-Blood Prince;* Dom Benken and Alex Paterson for *PixelJunk Shooter;* and Greg Edmonson, Clint Bajakian and Jonathan Mayer for *Uncharted 2: Among Thieves*. The BAFTA went to the team responsible for the *Uncharted 2: Among Thieves* score.

The third person action adventure also won the Use of Audio categories, with other nominees including the Development Team at Eidos/ Rocksteady Studios for *Batman: Arkham Asylum;* the Development Team from Activision/Infinity Ward for their work on *Call of Duty: Modern Warfare 2*; Jamie Jackson, Dan Neil and Tim Riley for *DJ Hero;* Vincent Diamante, Steve Johnson and Jenova Chen for *Flower;* and Gabe Newell, Chet Faliszek and Tom Leonard for *Left 4 Dead 2*.

Games were initially voted on by BAFTA's video games members and a carefully selected list of industry experts via a secure website. The titles who gained the most votes then went through to specialist juries who received the games approximately six weeks prior to making their nominations. The Video Games Award have been in existence as a standalone ceremony since 2003.

www.bafta.org

Games Not So Taxing

The final Budget of the current British Government took place on 24 March, with a surprise tax relief announcement for the games industry. The UK Chancellor, Alistair Darling, spoke in his Budget speech of the need to support the British game industry, and that it intends to introduce a sector specific Games Tax Relief for the UK video games industry, similar to schemes that are in place for the UK film industry. Dr Richard Wilson, CEO of TIGA, the trade association representing the UK games industry, commented: "The Government has chosen the future over the past, growth over decline, success over failure. Games Tax Relief will increase employment, investment and innovation in the UK video games sector." TIGA has produced research that predicts that a tax relief measure of this kind should create or protect 3550 graduate level jobs, and could increase or safeguard £457 million in development expenditure.

Gareth Edmondson, Managing Director of Ubisoft Reflections, based in Newcastle, said of the move: "This is a real triumph for UK developers. It will enable the UK games industry to remain a success story."

In the run up to the forthcoming general election, the other main parties have outlined their own commitments to the industry. Ed Vaisey, the Conservative party spokesperson for the game industry, told Develop magazine that the Conservatives would introduce game development tax breaks in its first budget if elected to form a government - though failed to provide much in the way of detail. The Liberal Democrats initially criticised Labour's tax break plans, but has since backed plans for state support of the industry.

Develop Keynote Confirmed

Adam Levenson, Activision's Director of Central Audio and Talent, has been confirmed as the Audio Keynote speaker for this year's Develop conference in Brighton (13-15 July 2010). Levenson has more than 17 years experience in video game audio production having contributed to games as a composer, sound designer, supervisor and audio director. He joined Activision as the Director of Central Audio 2006 and is responsible for overseeing original music, sound effects, post-production, audio technology, voiceovers, celebrity talent, and scriptwriters across Activision's portfolio of titles. In addition, he is spearheading the creation and implementation of shared audio standards and technologies across Activision's global studios. "In the next few years, truly interactive music and dialogue will revolutionise the video game narrative," Levinson commented. "I'm looking forward to describing some key aspects of this inevitable paradigm shift at the upcoming Develop Conference." Other confirmed speakers for the Develop Audio Track include Garry Taylor, Audio Manager, WWS Creative Services Group, Sony Computer Entertainment, (*The Getaway, Eye-Toy, Gran Turismo*), and Ben Minto, Audio Director, EA DICE (*Battlefield, Burnout, Black*).

Passes for the conference are available via the Develop website. Manufacturers and service providers interested in exhibiting at Develop Expo should contact Andy Lane at Tandem Events (andy@tandemevents.co.uk).

INFORMATION

Develop In Brighton: 13th - 15th July

Hilton Brighton Metropole, Brighton, UK

www.developconference.com

Guiding Audio Educators

IASIG, the Interactive Audio Special Interest Group, has been creating guidelines intended to address a growing need for appropriate instruction in audio for games in educational institutes worldwide. The first draft of the Game Audio Education Curriculum Guidelines has been reviewed by IASIG members and has been revised to include a recommended skills list as well as data on jobs and specialisations for game audio. This draft publication was made available at the IASIG Town Hall Meeting at the Games Developers Conference in San Francisco, USA, in March, in order to obtain feedback on the proposed guidelines from a wider audience. The goals of the project, according to IASIG, are to shorten the learning curve of new audio personnel in game audio by providing resources that people can learn from; to create a clear reference for terminology and creation methods in the world of game audio; and to supply schools with information to integrate game audio education into their curricula. Richard Stevens, IASIC working group Chair, said: "... We brought together dozens of game audio experts and educators from major universities to share their expertise and knowledge and produce a definitive set of course descriptions and learning outcomes for teaching audio for games."

The draft document can be downloaded from the IASIG website. The guidelines are part of a broader IASIG education initiative that includes free online resources for educators and students.

www.iasig.org/eduwg

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AES: London Or Bust?

There's no denying that the European AES show has been a mainstay of corridor conversations for a while, as rumours of crisis and cancellation are rife, but have so far proved unfounded. The exhibitor list for this year's London show (moved from Excel to the Novotel in Hammersmith), at the time this article was written, had approximately 70 represented brands on 36 stands, although in terms of papers and sessions, the conference is one of the biggest ever. Can Europe's biggest audio economy provide a much-needed boost, or has the AES ignored the criticisms and wish-lists of manufacturers for too long? PAUL MAC talks to AES Executive Director, Roger Furness.

Paul Mac: What reasons are people giving you for not doing the show?

Roger Furness: Primarily budgetary. The budget has had to be slashed in just about everybody's case, and they've had to decide on how to spend that budget... We're working with a number of other companies to find ways for them to be at the show... Rather than having a situation where we were going to have big exhibit halls where people had to have a big exhibit... we started off with the idea of having a smaller show... where people could have a 3x3 stand and still be noticeable and make their presence known.

...We'll have a very intimate show where the technical sessions and the exhibits are closely located in areas one above the other, so you'll be able to easily move from one place to another, and this will mean that networking is going to be much improved... I think you'll find it'll be a very friendly show where people can network and do business.

"It's very important that these things go ahead for the future of the industry, but the exhibits are also important because people who come to the convention want to see the latest products..."

PM: Who will be networking and doing what business? Isn't there an issue of focus here? AES is a single sector show, whereas a lot of the other shows are broadcast, or post production, or a specific demographic?

RF: I think the most important thing first of all is this is the only pro audio show that's going to happen in the UK, and indeed has happened in the UK for many years. AES itself hasn't been in London for 23 years. The advantage of AES is every stand, regardless of size, is about audio... There will be quite an emphasis, as there has been recently, on audio for broadcast, audio for sound reinforcement, recording, post production, and also games... People who are working particularly in the UK, will have an opportunity to come along and see a lot of audio companies that they wouldn't normally get a chance to see... The days of everybody having the opportunity to get off to foreign places to go to a show are, at the present, not there... Like every country that we go to, the majority of people will be from the host country and so I think it will give an opportunity for people who are working in the UK, in London – which as you know is the biggest audio concentration probably in the world, but certainly within Europe – to drop in and see a lot of interesting stuff...

PM: Audio production has become entwined with other media disciplines. Doesn't that mean the AES needs to think about other parts of media – not just audio?

RF: Other parts of media get dealt with in sessions. But you know yourself if you go to a show where the predominant matter is video or something like that, then the companies that are on the video side take enormous stands, and the people who are selling audio equipment tend to end up being very much the poor relation. Whereas at AES, because audio is the primary reason for being there, everybody has a fair crack at the whip, if you like.

PM: You don't think then that the days of being able to support an audio-only show in Europe are gone?

RF: A lot of exhibitors have expressed to us that they want the AES to continue, because it is their opportunity to show their wares to people who are primarily interested in audio rather than primarily interested in TV and just happen to walk past their stand. I think you also have to, perhaps, think of the support we're giving to audio companies who feel completely out of place and unable to hold their head up in these big broadcast shows... Clearly AES in America was smaller this time, in terms of how it has been in the past, but the exhibitors were very happy and thought it was a great show, and it worked really well for them... This is an important show about audio – this is really proclaiming that audio is important and audio exists, and audio isn't something that just gets shut in the back room, and 'oh yeh, maybe we'll do a couple of sessions on that'... We're not running this show for our benefit, we're running the show for the industry and the people who work in it, and we've been told time and again, even in tough times they want the show to go ahead.

PM: What's the priority? Is it the conference or the exhibition?

RF: Very much both – they complement each other. Clearly a strong technical programme is doing a service for the industry in giving a platform for things to be discussed which aren't discussed in other places... It's very important that these things go ahead for the future of the industry, but the exhibits are also important because people who come to the convention want to see the latest products, and most importantly at AES they feel that the people who are going to be on the stand, are the people who will be knowledgeable enough about the products to answer technical questions... People feel that they're able to talk to representatives for the companies perhaps in a more serious way than they otherwise would be able to.

PM: I guess there's not a lot of cross-fertilisation between the conference and exhibition in terms of actual target attendee. Is that true?

RF: I'm not sure that's completely true. Clearly the paper sessions themselves are very much research-orientated and forward looking, and would be not immediately approachable by somebody who's an operator in a local radio station for example, but one of the things which we always have done, and we're developing and doing more this time, is more applied business sessions, which are being organised in conjunction with APRS... We're going to have a couple of the sessions there which will be producers talking about recording, so these are going to be very much, I would have thought, for operators. So there's a wide spread in the technical programme between the highly technical cutting edge papers, and the broader interest, more practical, sessions.

PM: Does the existence of the conference depend on the existence of the exhibition?

RF: We could run them separately if we wanted to, but it's not been shown up to now that that's something that people desire.

PM: If at some point the exhibition did fail, could the conference continue? Does the conference depend financially on the exhibition?

RF: No, it's not essential that two run side by side... People have always asked that the two continue to run alongside each other because the two feed off each other. For example, if there's a session on digital mics, then people going to talk to manufacturers who are manufacturing them and see the products, is more likely in commercial terms to lead to a sale, than if there was no exhibition and it was just a conference by itself.

PM: There are a number of common complaints from exhibitors, which I'd like to address here. One is that the organisation of the conference and exhibition, and sale of stand space, is left very late.

RF: Yes, it's one of these unfortunate things. It was always considered an advantage that we weren't in people's faces and forcing them to sign up. We were always told how nice it was dealing with the AES, which seems to have now shifted... So yes, we certainly have intention to move this up and to start selling the shows earlier than we have in the past, because it does seem now that that's what exhibitors prefer. They still make their decisions very late in many cases, but they still like to have that opportunity.

PM: How much information will you have about AES Europe 2011 at the 2010 show?

RF: It's probable that we will have full information, and be able to talk about it.

PM: Such as date, place, ideas about content, and focus for the show? Is there going to be enough information for a manufacturer to base a decision on whether they can commit to 2011 or not?

RF: We will certainly do our best... We can't give detail about the content because it's very difficult to tie people down a year ahead as to what they're going to do, and what they're going to be able to do, but certainly yes, we can let people know more about what's happening, and we plan to do that.

PM: The late arrival criticism also applies to the availability of the exhibitor list. A lot of exhibitors base their decision on who else is coming – and it is a valid way to make a decision. Not making a list available until very late in the day puts everybody at a disadvantage?

RF: ...It's a chicken and egg: 'let's wait and see who else is in, but we're not in, so therefore, we're not on the list...' We try to tread a line between the two. The exhibitor list will go up on the website within the next week or two, when the technical programme and everything goes up. So by the end of the month (March), it should all be up.

PM: Marketing has in past years been criticised for being non-existent for the most part, and also left very late. Is that a budget consideration?

RF: It's partly budget, but it's also you know, a bit difficult sometimes to bring out the best features of the show early because they're still in the process of being planned... I think we've got to change that to telling people what might happen, and maybe 10 percent will change or fall out... we can do that much earlier. But we've always done it on the basis of telling people what's really happening, and so their decisions can be based on fact...

> "...we exist solely for the industry, and all the money made remains within the industry and goes to the things that we do in standards, and technical committees, education for students, and that kind of thing."

PM: Is that at the heart of what's been going on with AES? Is there a less commercial attitude than other shows to its business?

RF: Yes, I think that's certainly true. We exist solely for the industry, and all the money made remains within the industry and goes to the things that we do in standards, and technical committees, education for students, and that kind of thing. We're not being run by an exhibition tender... Not in as commercial a way as other organisations with considerably higher budgets than we have, and who make considerably higher profits as well.

PM: It has been difficult over the last four or five years – that's been the kind of timescale, just from my own observations of the show, over which the numbers have dropped. Is that fair, five years?

RF: Yes, the show has got smaller, but still fulfils a very important and necessary function. But I think you'll find that is also reflected by the number of people who are in our business... Even since the turn of 2001, people's budgets have been slashed. It used to be that the broadcasters would send 20 people to a show, now they'll send two... I doubt those times will ever come back, but it will improve if the economy improves. It's difficult to say, of course.

PM: I guess some of the commercial considerations are rendered a bit irrelevant by the status of the AES as a trade body, and a body that exists solely for the audio industry?

RF: If you're running a show just to be profitable, you will probably come to a different conclusion about what's important than if you're running a show as a service to the industry in which it's held. It doesn't mean that you don't try to act in some ways commercially, but certainly your criteria would be somewhat different... If we changed our name, and were just a commercial organisation looking to make a profit for whoever owned us, then clearly we probably would chase other sectors of the market to chase those dollars. But then there wouldn't be an audio show... We're trying to maintain the audio industry, which has been severely battered and doesn't have the same money to spend as some of the other sectors of the entertainment industry.

PM: I guess it's just difficult motivating people to see it like that. Exhibitors don't owe the AES a living, do they?

RF: Absolutely not, no. This is the thing Paul, we need to support each other in the support of our industry. We could just decide that, look, this is a complete waste of time, we're just not going to bother running a convention any more. Is that doing a service to our industry? I don't think so... I think the important thing is that we build up this show in London, which hasn't had a pro audio show for a long time... We build this up as much as we can so that in the future, the next year will be even better... This is a centre-front audio show, and that's what we're supporting... We're not doing it because we're thinking, 'hmmm, wonder what we can do this year, oh we'd better have another convention...' It's there because the industry wants it, and supports it. Yes, there are some companies that don't want to be there, and even if we did triple somersaults and offered to pay them to come, they still wouldn't come on principle, but those are just a few people. The majority are either wanting to be there and are, or wanting to be there but can't because of budgetary requirements. That's why we're trying to make it as simple as we can for people... You know you don't have to build a huge stand just to show your face. So I think in a way we're in this together. The more successful we are, the more successful you are.

PM: Looking into the near future, there's going to be an AES 2011 then?

RF: Yes... Oh yes.

INFORMATION

AES Europe Convention
London, 22-25 May, 2010
www.aes.org

A hero for the entry-level market? SIMON TILLBROOK takes the Black Knight to the tiltyard to find out.

VIOLET BLACK KNIGHT

Condenser Microphone

What visually separates Latvian microphone manufacturer Violet from virtually all other microphone producers is its quirky designs, and the latest one to come my way keeps with this trend.

Overview

The Black Knight is a side address condenser microphone with a cardioid pattern, just over eight inches long and 1.7 inches in diameter. Finished in a matt black, the 1.1-inch capsule is housed in what makes the Black Knight distinctive: a swivel mounted head section. You can tilt the head section by about 15-20 degrees. Three small peg type stoppers on the Black Knight's body limit the ball joint mounted head's movement.

This mic has very low inherent noise at just 6.5dB (A-weighted) and can withstand a maximum SPL of 134dB. The frequency graph indicates a good response down to about 40Hz with a small lift from about 2.5 to 4kHz of about 1 or 2dB.

The microphones has no other switches or built-in facilities, and is supplied in the usual purple wood box with a microphone stand mount that screws onto the base. Optional full suspension cradle and pop shield is available, and I had these available during the review period.

Use

The Black Knight is presented as a general purpose studio microphone and sonically, it had more depth than I thought it would. That small lift focused at around 3kHz is more prominent than the frequency graph seems to suggest, but not harsh or unpleasant as can be the case with low cost condenser microphones.

I did think it was a little dull in the high-end, but this was only slight and easily corrected with minimal equalisation, and you do need to keep in mind the price point this microphone sits in. The more subtle proximity effect gives good scope to the positional options, and I found this easily controlled with a nice depth without corrective requirements in most cases.

As for the Black Knight's swivel head, I must admit that I thought this to be somewhat of a gimmick on first inspection, but it is more useful than expected. I do wonder how this would stand up with continuous use in terms of tightness, but the build quality of the Black Knight feels far better than its price suggests.

The pattern is stated as cardioid, but I found that there was a fair amount of rear pickup, more bi-directional than cardioid.

The capsule has a single layer mesh and can be susceptible to popping, so the optional pop screen is a must, especially for vocal applications. Apparently, there are more holes than usual in the mesh to giv a more open and 'airy' quality, which probably explains the popping. Therefore, the Black Knight does need the additional isolation offered by the cradle.

Conclusion

The Black Knight is a good general purpose entry-level microphone with a nice response and build quality. It certainly represents value for money and is well worth your consideration.

THE REVIEWER

SIMON TILLBROOK is the Principal Music Tutor at Islington Music Workshop in London. The rest of his time is spent as a freelance engineer, mainly in the USA.

INFORMATION

£ Black Knight – GB£295.45 (exc.VAT)

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MITCHELL & TODD 301A

Monitor

The updated 301A from Mitchell & Todd is already established with many fans around the UK. PAUL MAC finds out if the improvements really are a big step forward.

If you don't recognise the name, Mitchell & Todd used to be known as Excel Audio, based in the UK. It designs and manufactures a small but well-formed range of professional active monitors that are well-respected and often vigorously endorsed by those who have come across them and had the chance to use them – myself included. I've had a pair of the original 301A monitors for quite a few years, and they are great speakers. In fact, they've served as a benchmark on a number of occasions for other speaker tests. Now it's time to re-visit this unit, as there have been a number of improvements, refinements, and upgrades to the product since we last covered it in depth.

The 301s are the biggest of the Mitchell & Todd 'Compact Reference Monitor' models, with dimensions of 40x246x300mm and a frequency response reaching all the way down to 35Hz. The other two in the range are the 101A (320x180x280mm, down to 60Hz), and the 202A (360x215x375mm, down to 35Hz), with the 802FEU (Frequency Extension Unit) sub that completes the low end down to 22Hz. The main 'spec' difference between the 301 and 201 is the maximum SPL of 112dB, as opposed to 109dB of the latter.

The main internal features of the new 301A monitors include a 28mm, Ferro-fluid cooled soft dome tweeter and a polypropylene coned, magnetically shielded bass driver with a large, bullet-shaped fixed phase plug – not something you see much of in pro audio. These are fed by two amplifiers via a minimum phase active crossover.

Externally, the most striking thing about these monitors is the metal front grille. This is removable, if it makes you nervous, but I didn't find a problem with it being there, and it definitely protects the drivers from accidental pokage.

Around the back, the main audio input is via either balanced XLR or phono. The most obvious functional additions to the 301A are the input level, three-band EQ, and EQ in/out controls on the rear panel. You can leave these well alone if you wish, but some circumstances make this a welcome addition. Other updates to the 301A include doubled LF driver protection and increased power in the LF amp to 140W (plus larger heatsink); a new tweeter with phase plate; a new 25mm 'super dense' braced front baffle; and improvements to the port design, internal damping, crossover circuit, and earthing.

In Use

The 301A is definitely on the large side of 'compact', and quite weighty with it, but this is about quality rather than whether or not they will fit on your book shelf. These are definitely well-made monitors; with an industrial-strength aura to them that is probably one of the reasons they have been so well received in OB and location music vehicles.

The first opportunity I had to try the updated 301As was in the studio of an existing customer – BBC Maida Vale – and then back at the ranch, with my older 301As as benchmarks. I tried my usual audition CDs, plus some recent and quite raw acoustic recordings.

In the comparison test, I was certainly expecting a little lift from the new monitors – more an enhancement than an upgrade, I guess. But I was proved wrong from the start. The differences were obvious, and enough to make me re-check signal paths for each pair.

Particularly with some dry, centre-panned vocals the difference was spectacular. The new monitors brought the voice more solidly into the centre and clarified it. Possibly the ventriloquist dummy had, until that point, been in the box and refusing to come out. The older 301s do not shirk in imaging at all, but I guess you don't know what you're missing until you hear it, and that vocal on the older monitors was definitely 'smudged' in comparison.

The other thing that is quickly obvious with this kind of recording is a more intimate sound that gets brought to the fore – not because of something that the monitors are adding, but because they are exposing more. You can hear the breath on the microphone, and the resonances that a vocalist's body and voice box brings to the mic.

In general I thought that the mids and highs of the new units were the most obviously improved. The spectrum coherence has been improved significantly. There's good separation between instruments, and that all-important air around the top of the percussion and reverbs has more detail and impact so there's no fuzzing of attacks here – it's all hung out for close inspection.

On complex mixes, the benefit this has on the sound field is almost as significant. Switching to the new monitors from the old opens up the stereo field and clarifies it at the same time. You could tell if this was a fault rather than a feature because you'd lose clarity – but no, it is definitely an improvement in accuracy.

In the bass region I found both the originals and the new monitors as good as ever. They don't lie, and they don't over-emphasise. For me, differences between old and new in the low range were harder to discern. I can say that the improvements in clarity I have described work right across the spectrum, which must also endorse the LF updates.

Overall, the effect of switching between the older 301s and the new ones is one of removing a kind of spectral or vertical compression. In other words, there's more clarity and more room to breathe. AM

INFORMATION

Ⓕ **GB£2,038.00 (exc.VAT) per pair**

Ⓐ **Mitchell & Todd (Excel Audio Systems), London,**
Ⓣ **+44 (0) 208 354 0820**
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THE REVIEWER

PAUL MAC is the Editor of *Audio Media* magazine.

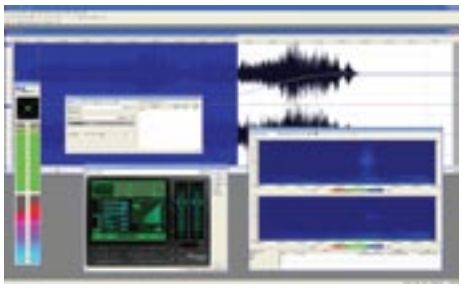
SONY SOUNDFORGE PRO 10

Editing and Mastering Software

SoundForge Pro breaks into double figures. RICHARD WENTK tries hard to avoid hammer and anvil puns.

SoundForge evolved from a simple Cool Edit-style track editor, and has kept many traces of its origins. It's essentially a sound file editor and mastering tool, designed for precision editing. Inside the box – and the download – are SoundForge 10.0, CD Architect 5.2, a sound restoration plug-in called NoiseReduction 2.0, and a mastering FX suite from iZotope. Sony's Acoustic Mirror convolution reverb tool is built in.

After a slightly awkward installation process and an update – Sony still hasn't gotten VST scanning entirely right – SoundForge loads with an empty work area. There's the usual selection of tools and menus, which seem to have drifted towards hinting at a certain well-known competing editor from Germany. Although there are similarities between SoundForge and the competition, both the presentation and the feature sets are significantly different.



SoundForge is very much aimed at precision audio work. For example, the spectral plotting can be zoomed or expanded to cover any frequency range. There's no CEDAR-style spectral editing, but you can see what's in a file with extreme detail, and then use keyframed and automated filters and other effects to shape it. The Noise Reduction plug-in is a powerful two-step process that removes a spectral footprint from a file. It needs careful setting up, but can be unexpectedly good at removing hiss and background noise from recordings. It's not up to high-end standards, but more than good enough for entry level applications. Similarly the iZotope mastering plug-in won't give Waves or Sonnox any sleepless nights, but packs a lot of powerful features into a small piece of software. In addition to all of the usual dither, multi-band compression, EQ and bit depth options, there's also a unique multi-band exciter. As with any mastering tool it's easy to create a digital fry-up, but it's also possible to create excellent results with careful tuning.

All Shiny New

New in SoundForge 10 is event-based editing – which means block-based editing on a single track. This remains a minimal feature. You can crossfade files and sections, but you can't apply a different FX chain to each block or file, as you can in Vegas. There's also Disk-at-once burning, which is perhaps slightly belated, and an enhanced timestretch feature based on a new plug-in. You can also apply a new resonant filter effect, and save files with Enhanced Broadcast WAV support. File support is a SoundForge strong point. A few formats are missing, including Apple's .m4a but to make up for this you can open XDCAM EX .mp4 files natively. Unsurprisingly, Sony's own formats are comprehensively supported, including ATRAC. CD ripping is included in CD Architect, although not quite with the sophistication available in a dedicated ripper such as Exact Audio Copy.

Although CD mastering isn't quite as compelling as it was ten years ago, the external but bundled CD Architect application remains one of the more successful takes on the medium. Including it in the package suggests that the workflow runs from SoundForge to CDArchitect. But in fact you can do simple cut and paste editing and processing, with minimal mixing, in CDArchitect, leaving SoundForge for more challenging tasks. You can of course create and edit playlists, export them, manage PQ events, and do all of the other essential things you'd expect from a CD application. You can't, however, create DVD-A discs or work with other disc formats.

Some omissions remain in the package as a whole. The most puzzling limitation is the lack of multi-lane editing and mixing. The help file states that 'SoundForge is not a multi-track recorder' – you'll need Vegas or Acid for that – but this seems like an odd feature to exclude. You can do limited multi-track mixing in CD Architect, and the new event-based mixing allows for simple crossfades between tracks. But it feels very limiting to find a professional sound editing tool that isn't capable of basic multi-lane mixing.

I also found metering slightly quixotic. You can set up separate peak, VU, and phase metering for channels and audio hardware. Unfortunately all of the meters appear in a single window, and the phase display resizes itself automatically to match the bargraphs. It would also be useful if the level and pan envelopes updated the waveform view, so you could get an instant visual indication of possible clipping.

Conclusion

In spite of the nitpicks, SoundForge has a lot going for it. It's relatively affordable, and some of the FX and editing features are unique. Although it's not quite as generously featured as the competition, it's a good tool for in-depth audio tweaking, especially if you use one of Sony's other products. Professionals may find it limiting. Parts of the interface are perhaps more intuitive and productive than the alternatives, and the learning curve is less challenging. This isn't consistently true, but the inconsistencies and quirks are relatively minor, and peripheral, and basic editing is speedy and productive, as it should be. If you already have a competing editor, you may not find the unique features completely compelling. But if you're looking for a toolset that can clean up location recordings, create atmospheres, and add ambience to dialogue, it's well worth considering – and with a free 30 day trial, you can try it for yourself.

INFORMATION

£ US$374.95 (Download), US$399.95 (Boxed)

Ⓐ Sony Creative Software
Ⓣ +1 800 577 6642
Ⓦ www.sonycreativesoftware.com

Ⓐ UK Distributor: SCV London, 40 Chigwell Lane, Oakwood Hill Industrial Estate, Loughton, Essex, IG10 3NY
Ⓣ +44 (0) 208 418 0778
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Ⓦ www.scvlondon.co.uk

THE REVIEWER

RICHARD WENTK is the owner of Skydancer Media, a digital production company providing sound, image, design and consultancy services to various clients in London and the West Country.

With the lauded *The Hurt Locker* having notched up some notable awards of late, JOHN BROOMHALL talks to the film's Recording Engineer, John Kurlander, about an equally laudible career.

What do Abbey Road and videogames have in common? If you're thinking *The Beatles: Rock Band*, good answer. However, there's another… Master Recording Engineer John Kurlander's staggeringly illustrious career reads like a who's who of popular and classical music, as well as covering the top rank of movie and videogame scores. From iconic Beatles recordings to this year's multi-award winning *The Hurt Locker* soundtrack, he has the t-shirt.

Final Cut Special: John Kurlander

They Shoot, He Scores

The Kurlander mantelpiece boasts three consecutive Grammys for best score soundtrack album and three consecutive TEC awards for best film sound production for his engineering and mixing work on the *Lord Of The Rings* trilogy. He also earned two Grammy nominations for classical engineering on the last recordings of Eugene Ormandy conducting the Philadelphia Orchestra.

From 1985 to 1995 he was Chief Recording Engineer at Abbey Road Studios and Chief Engineer at EMI Classics, before moving to Los Angeles to focus on freelance film scoring – which is where Audio Media caught up with him between sessions to reflect on a remarkable journey.

Way Back When

Kurlander: "When I was 13 years old, I lived one street from Abbey Road (then EMI Studios) and attended school nearby. One day my class was invited in to record sound effects for an EMI spoken word recording. We were ushered into the live end of Studio 2 shuffling past the Beatles' gear, set up for the Help recordings. I decided this was really what I wanted to do." At 16, Kurlander eschewed the Marks & Spencer's management training his father had in mind and applied to EMI, Decca, and the BBC. In an extraordinarily lucky break, he was offered a job at Abbey Road (it was only later to dawn on him that his friendly English teacher had most likely put in a word for him with neighbour Gus Cook, the studio's Assistant Manager). By the time he'd worked on recordings by Sir Adrian Boult, Sir John Barbirolli, and Daniel Barenboim, his proud opera-loving parents had come round. For three months up to Christmas 1967, he dutifully ferried tapes around the hallowed corridors, getting to know the staff and setup, until finally making it to the studio floor.

John Kurlander with composer Jesper Kyd at Capitol Studios. Photo by Linda Rapka, AFM Local 47.

Kurlander's first major assignment as Assistant Engineer was an historic one: "I was doing a post-session tidy-up when our Technical Engineer, who'd been appointed emissary of Geoff Emerick and George Martin, came in to tell me they wanted to know if I'd work on the next Beatles' album. His wise advice was, 'Don't ask why you've been invited! Do you want to do it – yes or no?'"

So began a period of working with the 'fab four' on their legendary Abbey Road album and subsequent solo projects. "I remember George coming in every day with the papers and a gigantic bar of chocolate for us. On that project he wasn't like a producer coming in and saying, 'Right everyone, this is what we're doing today'. He was there to give his expert advice and every time he put his paper down to get his hands dirty advising on the voicing of a chord or something, he was brilliant.

"They'd record basic backing tracks across two to four reels – about an hour and a half's material – then listen back to everything and either start overdubbing on a preferred take or decide to come back to it another time. Then two weeks later there might be a complete re-make of the song. Something like The Ballad Of John & Yoko which was mixed and wrapped within eight hours was very rare. It was more often a piecemeal approach with multiple takes and multiple versions – so I really had to be on top of the paperwork. Some days all four of them would be doing backing tracks and other days just one or two doing overdubs and vocals. Other times, there'd be lots of visitors coming and going and you'd have playbacks."

But in spite of the many famous faces drifting in and out, nobody could have eclipsed The Beatles themselves in Kurlander's mind. Was he in awe of them? "Oh yeah! Absolutely. I got butterflies whenever they walked in the room – especially Paul. I was reminded of it 40 years later when he walked into a BAFTA party in LA recently – I had that exact same feeling! I remember one day Geoff (Emerick) had me make the studio spick and span because of a VIP visit and I remarked, 'Look it's only the Managing Director of EMI – we're working with The Beatles!' Not even the MD out-ranked them! I learned so much and still carry it with me today – I'll find myself mic'ing a piano the same way we did in '69."

A Star Never Outshone

It seems no artist of any stature could phase Kurlander from then on, as he worked on projects ranging through classical, musical theatre, orchestral classic rock, and movies for 30 amazing years at Abbey Road, ten of which saw him taking the reins as engineering head honcho, a position which bought its own distinct pressures. "If there was a breakdown, we had to jump on it – clients would say, 'This would be okay at a lesser studio, but hey, this is ABBEY ROAD!', and it was like a stab in the heart. We had to keep standards so high, brainstorming every problem

to prevent a repeat. Equipment-wise, everyone wanted to send us everything to try – for instance, around '79/'80, EMI Research at Hayes built us a prototype digital mixer – that's how ahead of the curve we were. It was quite a responsibility. Given I was still engineering projects, I look back now at some of my diaries and wonder how I did it."

The grass could not look greener in St. John's Wood, although perhaps it did look a little more verdant in Los Angeles. "I'd been there on vacation around 1971 and after some time hanging out at Capitol was offered a job. Though I had turned it down, my appetite for the adventure of an exciting new lifestyle in film scoring was still nagging at me as I began to contemplate retirement. It was 'now or never', otherwise I'd have just gone straight from school to Abbey Road, done 35 years and then retired in Harrow! So I got my green card and went for it."

> "I really like the way the composers interact with the directors and visual artists in games, and I like the respect they're getting."

Better Believe It

Apparently, so impressive was Kurlander's CV that some of his new prospective American clients thought it might be fictional, but it's no surprise that his solid reputation with key individuals led to personal recommendations bringing a raft of new ventures. The list of movie scores he's recorded or mixed or both is endless and lately, even the world of videogames has been benefiting from his skills, for instance Jesper Kyd's score for Assassin's Creed 2 (as featured in last month's issue). Kurlander: "I really like the way the composers interact with the directors and visual artists in games, and I like the respect they're getting."

> "I mix better in a room full of people because it's kind of a performance – there's more spontaneity."

For someone so notable, Kurlander is refreshingly down to earth, shunning the limelight. "I'm actually very shy so one of the original attractions of recording was an involvement with music without being a public performing musician (out of the question!) although ironically, I mix better in a room full of people because it's kind of a performance – there's more spontaneity. I get on well with people but I couldn't possibly stand up on a podium to speak or even work the room at a cocktail party. People tell me they hire me because I'm really enthusiastic about their job – they say they don't know anyone who takes as much care, and I readily accept I have a reputation for being fanatical about detail. They don't have to worry about the small stuff because I enjoy it."

So, given he can to a great extent pick and choose gigs these days, what does it take to attract Kurlander? "There's always something positive about every project. It could be box office or critical acclaim, but the ones that end up being an enjoyable experience are the best ones and ultimately it's about people. I think the buzz for me is when you've done all the homework and you stick all the faders up and it's immediately wonderful. You're not struggling – in fact you're making it look easy. You're in the zone – everything's working and you know you've done a good job. If it then goes on to have critical or market success, that's really just the icing on the cake."

KURLANDER: SELECTED GEAR

- Neumann microphones (all of them - valve, solid state and the digital range)
- AEA R44C and DPA 4006 microphones
- Can't do without Shure SM57s
- ATC 20A speakers
- Lexicon 960 and Bricasti M7 reverbs
- All UAD and EMI plug-ins
- Avalon AD2022 and Millenia Media HV-3D mic pre's
- Antelope master clock with ProTools v8

MIXING THE HURT LOCKER

"We did two very low budget projects in the same month, one of which didn't even get a theatrical release. The other one was The Hurt Locker (it was much the same originally with Lord Of The Rings – the first call was from one of the producers who described 'an independent movie with a relatively unknown director, and we're doing it all in New Zealand'... I eventually won three Grammys so you learn never to assume).

"The Hurt Lockers' composers, Marco Beltrami and Buck Sanders, played and recorded most of the instruments themselves in the little bungalow they rent as a studio with its tiny backroom 8x8 recording area – just enough for one musician, music stand, and mic. We mixed the whole thing in four days.

"Director Kathryn Bigelow alternated between wanting some music and then wanting the film to be completely FX and dialogue. What Marco and Buck did was to speak to the Sound Designer who fortunately agreed to pass on a lot of ambient sound elements which they incorporated into the score – for instance a percussive thump from an explosion might become a beat. As a result you've got a score that's often indistinguishable from sound design. If you hear anything remotely rhythmic or with a musical pitch to it – that's the score. The music is innovative in blurring the lines on music/sound. Given Kathryn's dilemma, I guess it made the final cut precisely because it was so married to the sonic environment. Nothing should distract the concentration from whether he cuts the red wire or the green wire...

"It's brilliant to be involved with this movie. It's set so many records – the lowest cost box office film to win so many awards. It must give people who work on low budget films a lot of optimism."

John Kurlander: Studio Views

Kurlander On Mixing:

"Producer Norman Newell had a great skill of listening (in his words) as 'Mrs Smith of Wigan'. He'd ask, what would your elderly aunt say about this mix? And you'd think, 'Well, she'd probably say I can't hear his voice, or what's he singing about?'

"I tend to mix fast setting clear daily targets and working ahead of schedule leaving time to re-visit and refine 'problematic' tracks. I'll maybe produce several alt mixes of the difficult ones before choosing a master.

"Back in 68/69 I was taught that first you put the bass up, then bass drum, then snare, kit, guitars, piano, then vocals, and then you were done. I didn't know anybody who didn't do it in that exact order. Nowadays, it depends on the project and genre – I might go through everything individually or I might put all the channels up and see how they interact.

"Over-thinking mixes is a big pitfall as is leaving every decision to the end. A modern 100+ tracks PT session can be totally overwhelming if you don't sub-mix. People ask why the Abbey Road album sounds so good and I think it's because things were combined. At the end we had eight tracks and eight decisions to make – not 50 or 60.

"It's great to review mixes after living with them. Come back with fresh ears. Within five seconds you'll know if it's right. That's where mixing in the box is wonderful – keeping everything safely saved. Console recall can be a bit of a drag and premixing just to fit a large PT session onto a console with a lesser channel count can be time-consuming. I do love having all the fine control these days – having more options is good if you can manage it, but dangerous if you fall prey to it.

"Details are important but so is spontaneity – it's so easy to not see the wood for the trees.

"When you're mixing a variety of cues, it's vital to make sure you start with the right track – start with the 'problem' one or the atypical one and you can find yourself right down the wrong road.

"My preferred studio monitors are ATC20As and at home a B&W 5.1 rig. I check-listen in the car and I've been known to monitor a live orchestral session through my Macbook speakers just for a 'tiny speaker' reference.

"The old 'listening outside the studio door' trick still holds good – and that's a mono listen –

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even if you're in 5.1, what comes through the door is mono. One thing I learned in the '60s – ALWAYS check in 'one-speaker' mono – put it all one side… On big projects, I'll even have a 'mono day' sometimes.

"I check my mixes at incredibly low volume – almost inaudible – it tells you a lot.

"Above all, gain structure is so important – I think a lot of people can be overloading stuff unawares at hidden stages when mixing in the box."

Kurlander's Modus Operandi

"I always have a premeditated approach to recording – I imagine how it should sound in my head and then find the right gear to achieve it.

"When I start off working with a producer or composer I try to get inside their heads so I can customise an approach and sound that will work for them. Sometimes people ask me, 'Do you always mic that thing that way?', and I'll reply – 'Well I do for that artist'. I'm trying to create a sonic identity.

"Every working relationship differs. Some people want to be your best friend and they'll call you at night to discuss stuff and that's fine. Others want to keep it nine-to-five. You have to find out how they want it to be.

"Who you are as a person is as important as your technical knowledge. I've seen many tactless people blow it by saying the wrong thing. Good engineers have the knack of saying the right thing at the right time – and timing is king. First you have the thought – then you think do they really want to hear this? If yes, then you think of the right time to say it – but only when the other boxes are ticked."

ProTools Anyone?

When Kurlander moved to LA in 1996, the Sony 3348 was the 48-trk standard ½" digital tape machine for orchestral capture with 'this 8-trk computer thing called ProTools' mostly used by music editors for editing the DA-88 mixes. Occasionally two PT systems would be hooked up for a mix.

"I was working with David Newman and his assistant Marty Frasu and we started wondering if anyone had done more than 16 channels on PT. We asked our friend Tom Graham (now very senior in Digidesign) could he put together a 48-trk set-up and we'd try an orchestral recording. And so (with tape back-up!) the first ever multi-channel 48-trk orchestral PT recording was born. The rest is history."

Epcot, Huh?

One of John Kurlander's favourite press appearances was for an American pro-audio mag'. When asked his favourite LA scoring stage he went for 20th Century Fox. However, on receiving a copy of the magazine, he noticed something wrong.

Bold as brass, it cited John Kurlander's favourite scoring stage as the Epcot Centre in Florida. The writer had got mixed up with another piece about theme park music.

Kurlander: "It didn't upset anyone because it was so absurd, but I'll never forget walking into 20th Century Fox and all the guys saying, 'Epcot, huh? You prefer Epcot?!'"

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Preview

Fairlight EVO

STEPHEN BENNETT gets a sneak preview of Fairlight's latest EVOlution in consoles – a truly integrated and powerful production tool.

Fairlight has been doing post production systems for a long time now, with the emphasis on power, speed of operation, and integration into the modern post workflow. Its CC-1 Crystal Core technology is developed and refined, and continues to push boundaries of channel count and functionality; while the software has won many fans for its inclusive approach and user interface. Now the company is taking another step forward with its surface and control technology. The product is EVO.

New Frontiers

"The reason it's called EVO is because it genuinely is an evolution from our existing consoles," says Ken Barnsley, Fairlight's Sales and Marketing Director. He's at pains to point out however, that the new kid on the block won't mean the extinction of the earlier model. "The Constellation appeals to a particular type of person and the EVO will appeal to another," he says. "Broadcasters with multiple systems may not want to introduce a new model yet and would rather keep continuity throughout their suites." Tino Fibaek, Fairlight's General Manager, says that it was time to bring out something bigger and better. "The world has moved on and we can do more with the technology we have now. EVO is literally built onto the Constellation in many different ways – for example, the chassis of the EVO is technically the same as the Constellation, so you could take an EVO panel set and drop it into an existing Constellation chassis. That part worked very well and we were very happy with it – so why change it? We were one of the first companies in the business to use OLEDS, which give us a much better brightness and viewing angle and are much easier to read. We've evolved on that by using OLEDS for channel strips, but this time we've gone for higher resolution and quicker update times. We've got colour – we've got more processing power behind them. We've used what was working well for us but taken it to a whole new level."

The EVO is based upon an updated version of Fairlight's aforementioned CC-1 Crystal Core technology, which uses a FGPA (Field programmable Gate Array) based engine. A single CC-1 can support up to 220 physical audio I/Os in either analogue or digital formats, is scalable and, because it is Windows-based, plugs seamlessly into virtually any existing IT infrastructure. "We wanted to try and take as many circuit tracks off the board as possible – and put them into FGPA chips," says Fibaek. "You end up with a board with less tracks, less solder, and which is less fragile. It also means that if you come up with a new creative idea, you have a much better chance of enhancing the hardware. There's a lot more scope for future proofing and adapting to the changing world. Because it's a brand new design, we've had a chance to use the most cutting-edge FGPA technology we could lay our hands on. It's cheaper, it's faster, and it uses less power." The Constellation sports a physical processor on each of the panels, whereas on the EVO, this has been replaced by a virtual one. "If we find through the life of the product we need two processors on each channel, we can change that using the FGPA – we have much more scope to enhance the system in response to feedback from the users," says Fibaek. This is not a boxed product – it's something that can keep on evolving."

Master Of All?

Fairlight's long expertise in the industry means that the company has all the building blocks in place to produce a combined digital workstation, mixer, editor, and effects processor along with extensive video capabilities. "Fairlight is the only company in the world that has all these parts," says Barnsley. "We've taken those building blocks, and created a completely new media production system with them. We use the CC-1 because it does recording playback and editing really well. We've also we've got a range of sync boxes (the SX-20) and we can add 200 channels of MADI if the customer desires it, for example. We also do video very well – you can have a guide track which will play pretty much anything you can throw at it." Fibaek considers himself to be a toolmaker, creating the means by which creative people can ply their trade. "We try and listen to our users and turn what we hear into our interpretation of their needs," he says. "We want to give them a tool they can use all day long and which will allow them to produce the best work they can without them becoming tired – a tool that helps them rather than gets in their way." The compact size of the new console means that users ▸

THE REVIEWER

STEPHEN BENNETT has been involved in music production for over 25 years. Now based in Norwich he splits his time between writing books and articles on music technology, running his own Chaos studios and working in the Electroacoustic Studios in the School of Music at the University of East Anglia. He's also a filmmaker with several music videos and short films to his credit. www.stephenjamesbennett.co.uk

don't need to stretch too far to get to essential controls. "The nature of the EVO means that you can see things a lot easier – everything is close," says Fibaek. "We combine tactile controls with really powerful graphics and we want to make it so that your body motor control takes over and lets you operate the EVO while leaving your brain to concentrate on being creative." Barnsley adds; "In addition to all of that, it's really simple to use. I've never see a system that's so intuitive to operate. It's the first time I've sat behind a desk and thought, 'I don't need a manual, this is obvious.'"

Fibaek considers that, to an extent, the technology used in modern audio production systems is now irrelevant. "It's not the technology; it's the end product that's important," he says. "We've taken the graphics power available to heart to see how far we can push graphical feedback." EVO is designed from the off as a flexible system. "This is version 1," says Fibaek. "We can put the EVO in front of the users and listen to what they have to say. Then we could, if necessary, bring out a new version that was fundamentally different – it could have a bunch of new things in it that we hadn't thought of first time around. We're not constrained by the hardware in the way we used to be." Fairlight has taken this customisation to a new level with the EVO, by letting the user get down and dirty with the software itself. "We've developed a programming language that sits inside the system and, if there are things you'd like done differently or need some extra features or functionality, you can change things," says Fibaek. "For example, if you'd like to reassign the function of any given switch, you can write a piece of code to do just that. We believe we understand the basic needs of our customers, but we also appreciate that every single installation is different and the user has different needs."

Multi-faceted Facilities

The days of audio people working in just one area are long gone. The modern studio needs to be able to handle pretty much anything that comes its way and the EVO is designed to cope with multiple users and configurations – as Fibaek explains. "For example, you might be doing ADR with multiple talents, so you'd bring up your layout of the in-line panels on the EVO so that it's got the inputs side by side, perhaps along with gain controls and headphone mixes – you make the console work for you." The EVO's 48 assignable dual concentric knobs can be used to easily control plug-ins (the console supports the VST standard), while the centre section's touch screen and self-labelling key switches mean that it can hold its own in more traditional editing scenarios. "You might be picking up audio from a database, exporting to different formats and maybe playing embedded video – the world isn't as simple as it was in the past," says Fibaek. "You don't have a room that does a single job – you have a room that does a lot of jobs, and that's what we are trying to facilitate with the EVO." Barnsley hastens to add; "On top of that we have the music guys who don't just do music anymore – they work in multi media and find the multiple configuration setups particularly useful."

Modern high-end production tools are so powerful now that the announcement of a system capable of handling hundreds of tracks each with multiple EQ and compressors is almost commonplace. But allowing users to instinctively harness all the potential available is not easy – but Fairlight is attempting to tackle this problem with the EVO. "The complexity of using that power can be really mind boggling and not particularly intuitive, "says Fibaek. "What we are heading towards is a convergence of all the elements needed in today's high end productions – editing, mixing, recording, plug-ins, video processing – and putting them logically in front to you so you can get to them quickly. This is not a control surface that plugs into a separate mix engine, that plugs into a separate video system, that plugs into an editing system – it's a truly integrated console." AM

INFORMATION

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Allen & Heath iLive T72

With great power comes… the A&H iLive T72, finds ALISTAIR McGHEE; a compact mixer that doesn't hold back.

Allen & Heath has been brewing digital magic for some years now. From install products like the iDR8 to the substantial iLive series of systems, A&H has been burning the candle at both ends and with its latest products has pretty much covered the ground in between. Shiny and new are the R72 control surface, and the iDR-16 mix engine and I/O unit.

As each model has the same mic pre, let's firstly have a look at the difference between the modules:

The iDR-16 houses both the digital processing engine and the bulk of the audio I/O. The engine is identical in power to the systems across the iLive range offering 64 DSP channels and 32 mix busses. One nice feature is that the DSP is not shared across the outputs, so you can have full processing on all 32 mixes without robbing Peter to pay Paul.

If you are currently working with a big copper multi-core, then put the iDR-16 next to the surface and patch away at your inputs and outputs just like an ordinary analogue desk. The iDR-16 mix rack comes with a built-in ACE port to connect it to your surface. ACE is A&H's own audio over Ethernet solution, and although it's not a network topology, offering as it does only point to point connectivity, it's still pretty damn clever.

If on the other hand, you are tired of handling enormous drums of cable – and frankly who isn't? – then put the mix rack on the stage and connect it to the surface with a long piece of Cat5 string. Allen & Heath says you can run up to 120m, but sells you an 80m drum. I would suggest you err on the side of conservatism, not because I've had a bad experience, but only because your whole show is going down this Cat5 and that's a lot of egg for one face. Check out the A&H website for full cable info.

Back at the surface you have some I/O built in – four balanced line inputs on jacks, a pair of unbalanced phonos, and a coaxial spdif. The outputs have the same connection configuration and there's also an XLR input for a talk back mic and a headphone socket (actually two; one big, one little) for monitoring.

> "Squeezing such a powerful mixer into a such a small footprint means sacrifices and Allen & Heath has put pretty much all the mixer configuration on to the onboard touch screen computer."

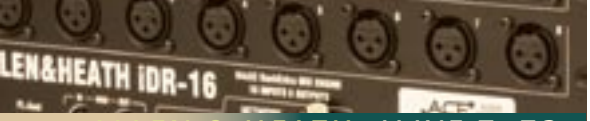
Small On Size Only

The R72 is the smallest Allen & Heath control surface yet and comes in a 19-inch rack friendly package that features 12 faders divided into 8 + 4, and with six layers, hence the 72. Squeezing such a powerful mixer into a such a small footprint does entail sacrifices, and Allen & Heath has put pretty much all of the mixer configuration onto the onboard touch-screen computer.

In the original iLive series, A&H offered a horizontal channel strip, allowing direct access to a wide range of parameters for the selected channel. In other words, you had lots of knobs for functions you needed to access in a hurry. If you bought a big enough surface you would get the whole channel strip to play with. The R72 simply doesn't have room for all those ►

THE REVIEWER

ALISTAIR McGHEE began audio life in Hi-Fi before joining the BBC as an audio engineer. After ten years in radio and TV, he moved to production. When BBC Choice started, he pioneered personal digital production in television. Alistair is now Assistant Editor, BBC Radio Wales, but is allowed out occasionally.



ALLEN & HEATH ILIVE T-72

hardware controllers so the surface has gone virtual. You don't lose any functionality, you just have to control it using the touch screen.

In a way this has always been an option because the iLive controllers have always had an onboard touch screen working in parallel with the physical controls on the surface. The actual channel strips seem identical to me to those on its bigger brethren, meaning you get two top bonuses. First, every channel has a small LCD screen built in, which allows you to colour and name the channel and display mix information and other valuable stuff. Colour coding and naming your channels is a real winner. On other consoles at this hotly contested end of the market you can name the channel, but as you can only see the name of the channel you have selected, it does nothing for your overview. But I hear you say, 'that is why they invented Post-It tape, so there'. Ah, Post-it is fine for an unlayered console, but do you really think you can stick three strips of tape one above the other and have any chance of finding the channel you want in a rush? Personally I prefer having coloured, named labels on every channel that change as I go up and down the layers.

"Leave the surface at home and mix the gig using your laptop. Leave the 100m Cat5 at home and control the mixer over wireless. How about (coming soon): leave your laptop at home and mix the gig from your iPhone?"

Second, every channel has a rotary controller that can be pan, gain, or trim. In combination with the shift key and alt-view you can have three functions per rotary. So for my preference, gain at the top level and pan on the shift key. It may be something to do with different work flows, but not having gain at the top level of accessibility on many digital desks is a real drop off. How many times have I reached out to the tweak the gain on the 'selected channel' and idly wondered why I can't hear any difference on mic A, only to realise I have been gaily altering mic F? Those days are gone with gain on the rotary.

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Techie Chat

Some system talk now. The R72 has a comprehensive show files system using USB keys and is fully interchangeable with the rest of the iLive system. Booting the whole system takes about 90 seconds, the slowest item being the linux touchscreen. The system passes audio much quicker than this, but it's worth bearing in mind. Because the R72/iDR16 has such distinguished blood lines you take for granted features that are pretty high brow. So plug a laptop into the surface and get extra control of your mix engine as the network connection is tunnelled over the ACE connection. In fact, plug a laptop in, running your amp control software, and tunnel that down the ACE and out of a mixrack network port and into your amp. That's cool.

Leave the surface at home and mix the gig using your laptop. Leave the 100m Cat5 at home and control the mixer over wireless. How about (coming soon): leave your laptop at home and mix the gig from your iPhone? Actually, I want to do the opposite, take the surface and the laptop and the iPhone so that I get belt, braces, and another belt, because I'm a 'just in case' kind of guy. The control doesn't end there. You can plug an A&H PL controller (it makes a whole range of control modules) into the mix rack and extend it on stage to give musicians control of their own foldback mix, or use a PL or MIDI controller to access faders that normally live on a lower layer but you want them to hand during the show.

The Power Of Eight

The desk has eight custom function buttons able to control mutes, PAFL, and mix settings, which you can blend together to build a setup that works just for you. This level of flexibility is really the acid test of what the A&H kit is all about. Take stereo channels – many digital desks struggle with this and you get kludges involving 'hidden' channels on lower layers or linked channels that don't have linked preamps. The R72 offers two solutions. First, a low level mixer configuration that hard codes a stereo channel at mix engine level, now your preamps are linked. But do this at your mix planning stage because this involves a mix rack rethink that takes almost a minute. Secondly, you have a gang function (with up to eight members in my gang) at surface level that is instant.

Obviously this means you need to think about which feature you want to deploy when. A simpler system with less flexibility will mean less thinking and less power. One of the reasons to choose the A&H is because of its power, and with power comes responsibility, and more to the point, great configurability. If you want the simplest system on the market, this probably isn't for you.

> "A simpler system with less flexibility will mean less thinking and less power. One of the reasons to choose the A&H is because of its power, and with power comes responsibility and more to the point, great configurability."

There's More

With that word of warning ringing in our ears, let's romp round some more features. Dividing the surface into 8+4 means you can keep your inputs on the eight side, and the outputs on the four, or any such combination that takes your fancy. You can even lock them together and treat them as one block. Freeze in layer – fix that vocal mic in every layer so you can get at it no matter what. Fader display of all mix sends. On some desks you get a 'sends on faders' button associated with the Aux sends, allowing you to display and control the Aux send levels using the faders. The R72 takes a slightly different approach. Press the blue mix key on any mix and the faders will automatically show you the level send, while the LCD panel on every channel will show the channel's status (on or off an pre/post information) with regards to that mix. Or you can work backwards from the channel fader. If you have inputs on the bank of eight and Auxs on the bank of four, press 'mix' on an input and the send level will be displayed on the Aux master faders. And if you like to have your cake but are worried about eating it, you can always configure the sends on the rotaries so your channel faders are always inputs.

The mix rack comes with ACE as standard, but there's a spare slot into which you can plug more ACE, MADI, or Ethersound. There's also the MMO with ADAT, AVIOM, and iDR8 type connectivity, and Dante is round the corner. At the simplest level it allows you to grow your system by adding a second mix rack, and then because the rack isn't just I/O but also DSP you are then able to spread your mic inputs across a tonne of DSP channels allowing you to apply different processing for, say, FOH and monitors. And while the mic amp gain has to be the same for both, you get digital trim of up to +/-24 dB. So set the mic amp gain roughly and then use trims to set different levels for FOH and monitors. And as you're using the same mix engine as the big boys, you get the same option of up to eight onboard FX engines and the ability to route the sends and returns just like an analogue console if you want.

Conclusion

So what's not to like? Well that's a bit tricky because many of the things I would like – more I/O on the surface or PL connectivity at the surface end, for instance – are available on bigger systems in the iLive range. I wish it booted quicker, and from a selfish broadcast point of view, wish it had split PFL monitoring, and that a tweak of the soft keys would let me use them directly as talk back buttons on a single key press. But these are really nit level nit-picks, it's a live desk after all.

On the up, if you're happy with the idea of investing time in getting to know the system, the power available is well... considerable (I have given up 'awesome' for Lent), very considerable. And because it is part of a bigger system, upgrading is easy. As a Stones fan it pains me to say it, but the R72/iDR-16 combo is the Sgt. Peppers of sub ten grand digital mix systems.

INFORMATION

£ iLive-R72 – GB£5,114.00 (exc. VAT)
iDR-16 – GB£2,983.00 (exc. VAT)
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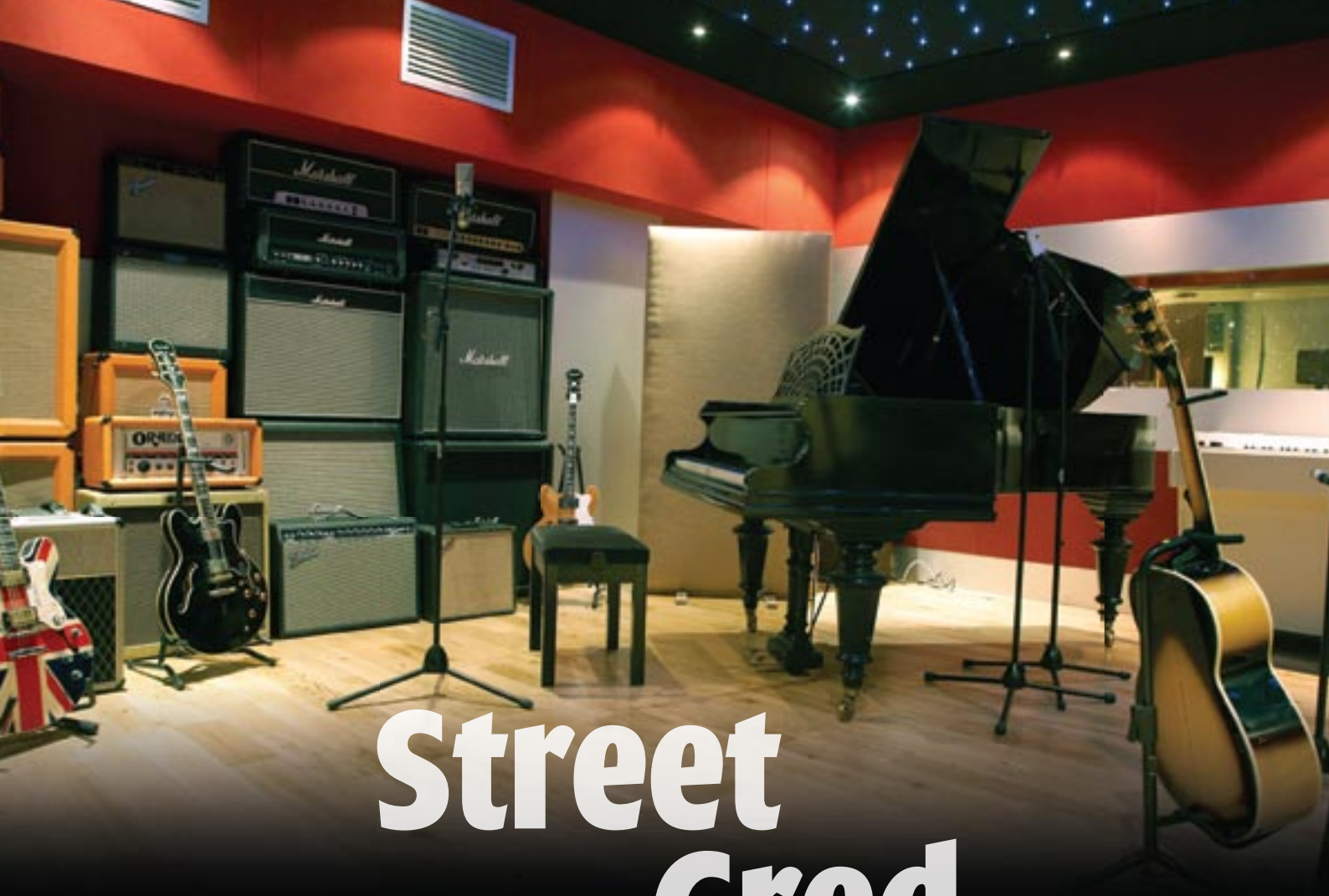

Street Cred

The Rise of Dean Street Studios

PAUL MAC visits a unique music studio in central London that is defying the economics of W1 with a combination of gear, vibe, and creative business sense.

THE KIND OF STUDIO YOU'D EXPECT TO FIND in the heart of London's Soho these days has a Dolby license, a posh coffee machine, a smattering of polar-necks, and some alarmingly thick-rimmed spectacles. It has no musical instruments, few visiting musicians, and definitely no dogs. Sadly, at least in some people's eyes, real estate value, technology, and dominance of the post production community in central London has seen off many of the area's more rock 'n roll inhabitants. But there is still one left that boasts more trainers than runners, and where the keyboards are more quirky than qwerty. It even has a dog.

With Dean Street Studios, the clue to location is in the title, though it's less obvious how a music studio still survives amongst the corporates and the coffee shops. Of course, Soho isn't 100 percent chic and is still a vibrant and sought-after area, but isn't that just the problem? When rates are tight, it's tempting to move to the country, leaving the townhouse to become ten video suites and a dubbing theatre. Not Dean Street – it's even (gasp) investing in its creative stockpile, with a hand-made Mellotron and a new SSL amongst the most recent arrivals.

Moving In

The rooms at 59 Dean Street became Dean Street Studios in 2007, when Jasmin and Suzanne Lee, Ben Roulston, Brenda Rowe, and Keith Mahony took over the building four months after it had been vacated by production company Joe & Co, which used the building for 18 years. Between 1976 and 1989 it was Tony Visconti's Good Earth Studios, and before that it was Zodiac Studios.

When the current team moved into Dean Street it was just an empty space, or as Jasmin Lee, Studio Director and Manager, puts it: "...It looked very, very sorry for itself... I got led through this warren of studios and I completely fell in love with it... I was on the phone straight away." Soon, a studio spruce-up was underway and equipment was moved from its old home in Sarm East. Dean Street Studios officially opened for business in August 2007.

The first console in Studio 1 was an SSL AWS900+SE, which did the job of raising the studio's profile and spreading the word, but after a while it became clear that its 24 channels weren't enough for many mixing projects that were looking for a home. Jasmine Lee's business partner, Ben Roulston, chose the 48-channel ▸

Duality SE console for this reason, nicely complementing the Neve pre-amps that the studio already owned. Recording choices are Pro Tools HD3 and a Studer A80.

Thankfully, Studio 1's main live room is not a simple rectangle and leaves room for some creative positioning. There's a good view from the control room into the live room, and there's a 250 square foot booth, again with good views into the live room. "The only thing we changed was the wooden oakwood floor at the front," says Lee of the Studio 1 live area. "...Because it was carpet before, it was just too dead, and wasn't really providing much opportunity. We can put some rugs down if we need that dead space in there, or go to the isolation booth, so it works very well.

"If you put drums in the centre of that oakwood floor, they sound really big... There's a different sound at the back end, because it's got the old parquet floor that was there when Tony [Visconti] was here. We've left that because again it's a different sound, it resonates through the floor. And then you've got the isolation booth, which is a really dead room, so you get really, really tight drums."

Studio 4 has a recently re-capped Amek Angela console and Pro Tools HD2, while Studio 2 has an Avid 002 and Pro Tools LE system.

The Stuff Of Dreams

There's a fantastic number of instruments, outboard, and mics hanging around the facility, from a Bechstein Model C grand, Hammond C3 and Leslie, Wurlitzer piano; guitars from Fender, Gibson, Rickenbacker, and Epiphone; classic guitar amps, drums, outboard and more. And of course, there's that new Mellotron, which was only recently delivered after a two-year lead-time on the order.

These well-stocked rooms are one of the big attractions of Dean Street Studios, and Lee knows that better than most: "I've been in studios for many, many years, you know, through my dad [Alvin Lee] I've grown up in studios. I also I run a management company, so I work closely with musicians, and I know what they need and what provides them with the most stress-free creative environment. If you've got everything there for them, it's like walking into a treasure trove... they can turn up with nothing, and they've got everything here."

In many other studios, the 'additionals' on all of this would make for a very complicated invoice, but Lee takes a different approach. It's all-inclusive. "In other studios," she explains, "You book a room for a certain amount, and when you finish the session you've got charges for using the Pro Tools, for the engineer, for using these mics... I think it's the most off-putting thing, especially when you've got a budget in your mind and you agree it with the

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The stockpile-of-stuff is an obvious draw for artists who want to try new ideas, but does it actually translate into 'speculative sessions' – the kind where musicians hang out and conjure ideas from the studio experience, rather than simply turning up for a closely budgeted performance? Lee says that some international artists and writers do still enjoy playtime in the studio, and some more local regulars will pop by to use the piano or other instruments. Usefully, there's enough space and isolation to accommodate a combination of normal sessions, experimentalists, and project room clients around the building – which is also ideal for the kind of creative atmosphere the studio is trying to nurture.

Spreading The Word

Overall, the clientele is incredibly varied. The studio hosts everybody from unsigned acts recording demos in the back-room, to Indie and major label artists, and even US writers who are in the UK for a job and need somewhere central to work. The location has a big part to play in all of this, and can take its fair share of advantage from the more usual Soho set. For example, the studio recently played host to a big band session for an advert that was being created locally, and the band subsequently came back to record its album there. "We're not pretending to be a production house," comments Lee. "We don't do what those guys do... This is us. We are basing ourselves on the old-school vibe of studios, where it's a lovely place to come and be, and you feel like one of the family."

Dean Street's most recent clients include Mark Almond, Reverend And The Makers, Nadine Coyle, The Score, and the latest Bottletop (bottletop.org) charity album, which includes collaborative recordings between Brazilian and UK artists. UK contributors to that include Carl Barât (Libertines, Dirty Pretty Things), Speech Debelle, Gruff Rhys (Super Furry Animals), Matt Helders (Arctic Monkeys), Kate Fly, and more.

> "You've got to be on it; you've got to provide a good service and a good place for people to come, otherwise it can fall in on itself very quickly."

Bottletop's mission is to both alleviate poverty and empower young people through the local production of things such as belts, bags, and even guitar straps made out of recycled ring-pulls and bottletops. It currently supports programs in Malawi, Rwanda, Brazil, and the UK. As well as the direct benefits to the Bottletop cause, the charity album also helped establish the developing studio with a lot of high profile acts. "We started the album 18 months ago," says Lee. "And it brought in a hoard of big, big clients who came down and provided their services for free on this album – clients who wouldn't normally have found us... The first of those sessions was three days of the maddest fun you've ever had – just crazy. There were about 40 artists down here, jumping in when they wanted to, and playing... Literally, every single one of those who came in for the charity album has come back and used us again."

Of course, spreading the word is fine, as long as that the 'word' is backed up with action. Lee: "You've got to be on it; you've got to provide a good service and a good place for people to come, otherwise it can fall in on itself very quickly."

Back To Skool

Lee describes the Dean Street approach as "old-school vibe with a new way of thinking," and there is certainly more to this business than simple studio time. For example, it has started a session musicians' agency, which is already getting a very good reputation among UK producers. And there's Dean Street Live, which is basically a corporate entertainment and events company, providing acts and infrastructure to events organisers – anything from musical turns and tribute bands to PA, lighting, rigging, and even fencing.

Back in the studio though, Lee is determined

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to reform the environment for studios in general, with the first stop being destructive inter-studio rivalry. "I've grown up in the whole studio environment, so I know a lot of the old-school studio managers who are used to what the budgets used to be, and how the industry used to be. I totally respect them, but I'm on a mission to change things.

"There are certain studios in the UK, that still see other studios as competition... I think every studio offers something unique to the clients – nobody's competing with each other, and I think you will always get to a client for either a console reason, or an equipment reason, or a location reason. There's always something different. With the newer studios, we're trying to collaborate rather than compete.

"There's still one studio that will always try and ring up our clients and undercut our rates, but we're finding that nobody's going anywhere else when they come down to use us... A lot of people have forgotten about the basic values that musicians, and managers, and record companies want from a studio."

Organic Expectations

And what does Lee most expect from Dean Street? "I think, for the studios, I just want it to stay brilliant. That's all I need from it... And obviously to grow the client base, and make more people aware of who we are and what we do... to get people to come down and have the whole Dean Street experience. There's a lot of growing to do in the other sectors – Dean Street Musicians and Dean Street Live. We've only just launched them in the last month or so, so it's new ground.

"But I'm very happy just to grow the studio very organically, and it's worked very, very well. We were up on our own feet, without investors subbing us, within the first six months. We thought it would take two or three years to get there, and it happened very quickly. It's enabled us to grow a lot quicker than I thought we would."

INFORMATION

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Focusrite
OctoPre MkII & OctoPre MkII Dynamic

SIMON TILLBROOK finds that while the OctoPre gives much, the OctoPre Dynamic gives even more.

Focusrite is one of those companies designing and manufacturing high-end pro audio equipment of various types, including boutique style dynamic processors and preamps to full blown large format mixing consoles, that targets the smaller DAW production based user.

From the early, and very popular, Green through to the Platinum and, most recently, the Saffire ranges of cost effective processors and interfaces, Focusrite has established a solid reputation and customer base.

Joining this successful group of units, and extending the Saffire range, are two new additions, the Focusrite Octopre MkII and Octopre MkII Dynamic.

> "When it comes to digital connectivity, there is a difference between the two Focusrite interfaces, but it was not so long ago, with earlier incarnations of Focusrite's Octopre units, where digital connection was an optional board fit."

Overview

Both the Focusrite Octopre MkII and MkII Dynamic sport the same blue and black livery asd the other units in the range.

Both Octopre units are seen as expansion devices to a DAW system for the purposes of tracking and, dependant on the general requirements of the system, you could go for either the Focusrite Octopre MkII, with its simple feature set, or the more comprehensively featured Focusrite Octopre MkII Dynamic.

You are not limited to DAW system use as they can both be used as stand-alone interfaces.

Both units are single nineteen-inch rack mount and have eight FET-based microphone preamplifiers. These are the same as seen on the rest of the Focusrite Saffire interfaces and offer a gain range from +10 to +55dB. The Focusrite Octopre MkII has the addition of a -10dB pad switch.

Phantom power is available on all microphone inputs, and this is switched on and off in banks of four, 1 to 4, and 5 to 8.

You have eight balanced line inputs offering a gain range from -10 to +36dB, and the first two inputs also give you a direct input for instruments with gain from -10 to +55dB.

The rotary gain controls for each of the eight inputs are lined up along the front panel. This is where we also have metering for the eight analogue inputs. This metering is a five LED full-scale style running from -42, -18, -6, -3, through to odBFS.

Connection to these various inputs is via Neutrik combination sockets. In the case of the Focusrite Octopre MkII Dynamic, these are all on the rear panel, but with the Octopre MkII the first two inputs are accessed from the front panel. These are unfortunately not mirrored on the rear panel.

Eight balanced analogue outputs are provided on both the Octopre MkII and Octopre MkII Dynamic that can be accessed by eight TRS sockets on the rear. ▸

THE REVIEWER

SIMON TILLBROOK is the Principal Music Tutor at Islington Music Workshop in London. The rest of his time is spent as a freelance engineer, mainly in the USA.

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Digital Connectivity

When it comes to digital connectivity, there is a difference between the two Focusrite interfaces, but it was not so long ago, with earlier incarnations of Focusrite's Octopre units, where digital connection was an optional board fit.

Both the Focusrite Octopre MkII and MkII Dynamic have sample rate options of 44.1, 48, 88.2, and 96kHz, which is both indicated and selected from the front panel.

When it comes to the Focusrite Octopre MkII, there are two ADAT optical digital outputs on the rear. Sample rates up to 48kHz allow all eight channels to come from both outputs simultaneously to feed two separate devices, and with 96kHz the channels are split, 1-4 output one, and 5-8 output two. There is a single BNC wordclock input socket as well for external clock reference.

The Focusrite Octopre MkII Dynamic has both digital input and output options. As well as the same digital output specification, as previously described, there are two further ADAT optical sockets for the input. The mirroring and duplication relating to sample rate follows as before. The addition of the ADAT format digital input also allows for optical sync. We also have an addition BNC connector for wordclock output.

> "Just utilising the preamplifiers initially, when working with loud percussive and bass sounds the performance was good and solid."

With both the Focusrite Octopre MkII and MkII Dynamic, indication and switching between clock sources is located on the front panel.

Compression

The main feature of the Focusrite Octopre MkII Dynamic (along with its digital input capabilities) is the compressor found on each of the eight analogue inputs.

The design orientation of this compressor seems to have been very specific. This is a compressor designed primarily for use during the recording process for drums and bass.

Focusrite used its Red3 compressor as the reference, modelling the characteristics by ear of the compressor on various drum and bass sources, and then implementing them into the Octopre MkII Dynamic compressor.

This is a VCA-based compressor design, unlike the opto designs in previous Octopre devices. These are faster and generally less coloured, so good for recording applications. This compressor uses a progressive soft-knee curve with a fixed attack time of 1.2ms and fixed release time of 28ms.

Control is via a single rotary control found next to the input gain control on each of the Focusrite Octopre MkII Dynamic eight channels. As you increase the level of this rotary pot, the threshold level is lowered and the make-up gain is increased.

The ratio in this standard operating mode is 2:1, but you have a button next to the rotary control labelled 'More'. This is something you would likely use on higher SPL signals. The ratio is increased from 2:1 up to 4:1, and the threshold range is reduced over the travel of the rotary control.

Use

I used both the Focusrite Octopre MkII and MkII Dynamic in a variety of system setups for recording. With the various DAW setups, after the initial process of setting the interfaces up there were no surprises; all simple enough. When used stand-alone the signal flow through the units worked perfectly into both analogue and digital systems.

Just utilising the preamplifiers initially, when working with loud percussive and bass sounds the performance was good and solid. These preamps that are part of the Focusrite Saffire range are clean and exhibit very low noise with little, if any, colouration. For many, an ideal tracking preamp, and in-line with much that has gone before with Focusrite preamplifier designs.

With some microphones, and when using with lower level sound sources, I found that I sometimes wanted for a little more in the gain range. This was not going to stop me being able to use the inputs for the chosen source, but a little

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more gain would have been nice to have. Line inputs and direct instrument input on the front of the Octopre MkII all performed as expected, providing sonically good results every time.

The Pad on the Focusrite Octopre MkII input preamp is a useful addition, and as a solid set of Focusrite Saffire preamps the Octopre MkII represents good value as an expansion to an existing system setup.

Now for the Focusrite Octopre MkII Dynamic, and in particular the compressor. I have used the Red 3 many times and, as a program sympathetic compressor always found it a joy, though for me, more for use as an effect type than a straightforward compressor.

I find myself being more than a little sceptical when approaching single pot compressor controls, especially when modelled on or emulating a revered device.

In standard operation on drum and bass signals, as the design approach intended, I found the compressors very good indeed. The basic musical 'not really there' compression was easily achieved. When switching the compressor mode with the 'More' button you certainly have a more aggressive level of audible compression, but in no way harsh or unsympathetic to the audio source.

> "The Focusrite Octopre MkII and MkII Dynamic are now competing in a hugely competitive market sector unlike many similar Focusrite devices before them."

Moving away from the designed sound use, and applying the compression to vocals, guitars (both acoustic and electric), the Focusrite Octopre MkII Dynamic compressors performed very well indeed. Its good transparent compression for tracking purposes that you can simply set to lightly control the audio dynamic range to your storage medium, and then forget about it.

Conclusion

The Focusrite Octopre MkII and MkII Dynamic are now competing in a hugely competitive market sector unlike many similar Focusrite devices before them. Both units are reasonably priced, but have stiff rivals to deal with.

The Focusrite Octopre MkII offers good solid performing preamplifiers as we have come to expect from such a manufacturer and, as part of a wider tracking setup, represents good value even though the lack of digital input may put some off.

The Focusrite Octopre MkII Dynamic, even though it has a higher price tag, does offer quite a lot more. The digital connectivity is comprehensive but, most importantly, the simple compression offered on all eight channels is still a very useful feature in a tracking session. It works remarkably well for a single knob design and has much of the feel that the Red 3 has.

As another input option in your setup, you will be pleased with what both units sonically offer, but the addition features of the Focusrite Octopre MkII Dynamic may well make you fork out that little bit extra.

INFORMATION

£ OctoPre MkII – £329.00 (inc.VAT)
OctoPre MkII Dynamic – GB£499.00 (inc.VAT)

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World Peas

Image Source: www.flickr.com

It's an all-talented and hi-tech stage in New York, as CLIVE YOUNG visits the Black Eyed Peas during their two-year world tour.

Been to a boring concert lately? Thanks to production budgets that match the economy, the empty stage with a single video screen has become the bland norm. While purists rightly note that it places emphasis back on the music, in our media-saturated age, acts risk boring arena audiences unless they have truckloads of personality and another semi full of good songs to boot.

Going against the grain, however, are the Black Eyed Peas, currently crossing the US as part of a nearly two-year world tour. Every stop along the way is a two-hour show that delivers an opulent, over-the-top spectacle, complete with a two-storey stage, flying motorcycles, a DJ booth that pops out of the stage before perching 14 feet above the crowd, confetti canons, and more video screens than Times Square – not to mention a massive audio system from Clair. Moreover, the act has plenty of hits to dole out and charisma to spare; as FOH Engineer Dave Haines remarked, "Usually when there's more gags in a show, it's to help gloss over the music, but obviously that's not the case here."

Vets On Stage

While a Peas show is all about a good time, the band-members are far from slackers. While the four members variously sing, dance, DJ, and play music on stage, they're also bona fide studio veterans, having produced themselves, member Fergie's solo album, and other acts, including tour openers LMFAO. Having that kind of technical acumen around is a boon for Haines and monitor man Ryan Cecil, but it also requires that the engineers bring their A-game every day.

"These guys are all producers, so there's no fooling anyone up there; if they ask for something and I don't get it right, they know," laughed Cecil. "The other day, Fergie came to me and said 'there's a guitar panned too far to the left.' With everything that she's doing out there, she's still right on top of it, noticing exactly what's going on."

On the flip side, having the production team on stage means they can communicate technically what they want, plus it's easy to find out the mix details and plug-ins for each song. In Haines' case, it also ensures that he's mixing on his preferred console – a Venue D-Show console – because the desk was given to the band, along with an Icon desk for leader Will I. Am's home studio, by Digidesign in 2005.

"On the flip side, having the production team onstage means they can communicate technically what they want, plus it's easy to find out the mix details and plug-ins for each song."

On Auto

As is the case with many live acts, there's a bit of the Antares Auto Tune Evo plug-in being employed, but unlike most productions, the engineers can freely admit this since it's obviously used for the popular vocoder-like, hard tuning effect. "I'm using some Waves plug-ins," added Haines, "mostly the L2 Ultramaximizer Limiter and MaxxBass because those are used extensively on the album. The rest of it's stock stuff from Digidesign; Ryan's using a lot of Crane Song Phoenix stuff and I've been thinking about experimenting with that as well."

Cecil explained, "I'm using Phoenix on all the keyboards, because it really helps give an analogue feel to them. We haven't moved into using it on vocals, but we've talked about it. We do have Digidesign Smack! on Fergie's vocal, and everything else is pretty straight up. With Will, he's the Producer, so he'll hear stuff that I'll never hear with delays and things. He notices latency ▸

on anything and that's become a big issue; that's part of why we're using Venues – the Auto Tune's internal so we don't lose any time."

The house mix feeds into a sizable Crown-powered PA that includes main hangs of 14 Clair i5s per side with 14 i5B subs hanging next to them. Side hangs include eight i5s and eight i5Bs each, and the rear fill hangs sport three R4s per side. Clair's P2s are used for front fill, and everyone gets a heaped helping of low end, courtesy of 32 BT218 subs that are powered by Powersoft K10s amplifiers.

Not Sidelined

Over at the side of the stage, Cecil oversees a 96-channel Venue Profile used by the Peas and both opening acts, sending mixes to a variety of wedges, sidefills, and personal monitor systems. He noted, "We've got the new Sennheiser SKM 2000 systems for both the wireless mics and personal monitors, which are working out really well. I'm running 32 channels RF total. Most of the band use Ultimate Ears ear buds; Will I Am uses Future Sonics – we all love both, so it goes back and forth between the two."

The backing band includes two guitar players, drums, keyboards, and a DJ, and while nearly everything is direct ("We've got 400 Radial DIs, roughly," joked Haines), that brings added wrinkles to the mix.

"The drums are mostly digital, with only three real toms, a real snare, and a real high hat," said Cecil. "Everything else is samples of the actual stuff off the record – which is cool because it gives the Peas the sound they want and it gives us the most consistent sound you could ever ask for. On the other hand, there's now 20 kick drums, 20 snare drums, so you can't just EQ a drum and say you're done with it for the room."

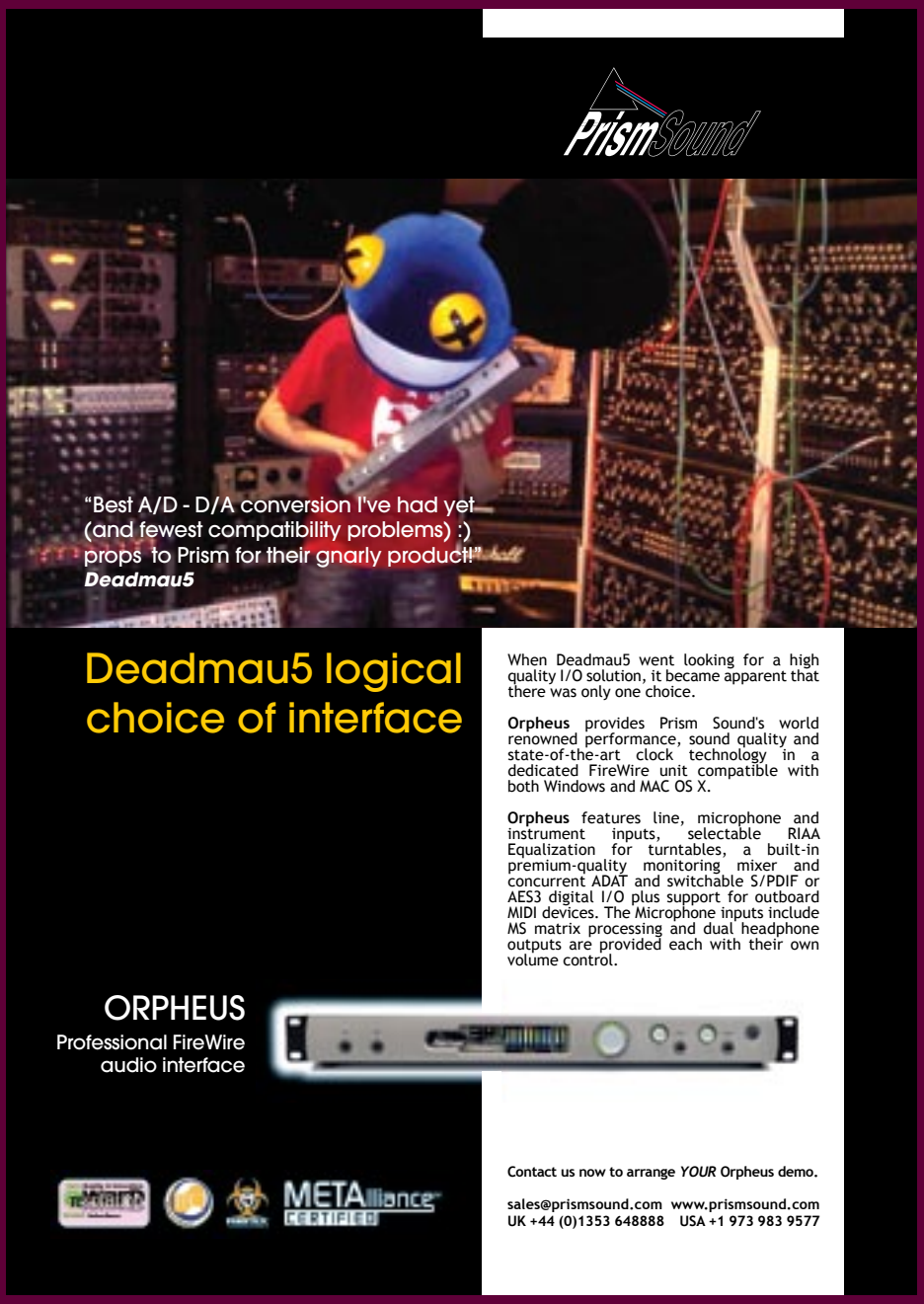
> ""It's always good to have a production manager that's a sound guy," said Cecil, "because when I said, 'The side fills aren't loud enough,' I never heard once, 'We're going to kill seats'."

Say What?

Despite the personal monitors, it's not exactly quiet onstage, coming in at 117 dB, A-weighted – before vocals. "It's insanely loud on stage," said Cecil. "Everything runs in limit for most of the entire show, including the double 18s in the side fill PA. Will I. Am wears one in-ear with only his vocal in it, because they want it to sound like we put a dance club system into a club somewhere and they're partying with friends."

When they requested more volume on stage, Cecil's request for more gear didn't require any politicking, in part because Production Manager Tim Miller is a longtime engineer himself, having helmed acts like N*Sync, Will Smith, and New Kids on the Block. "It's always good

Dave Haines mixes the Black Eyed Peas on a Digidesign Venue D-Show console, with the aim to turn every arena into a dance club.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to have a production manager that's a sound guy," said Cecil, "because when I said, 'The side fills aren't loud enough,' I never heard once, 'We're going to kill seats'. All of a sudden, there was a truck with more cabinets and subs."

Ultimately, that may just be a few more boxes to keep track of on the massive 21-truck tour, although Miller himself added, "It's actually 24 when you count the VIP and concourse trucks," referring to 18-wheelers filled with furniture, concourse booths, and their attending audio systems. "There's more audio on this tour than probably any arena tour's ever had," Cecil mused.

> "The overwhelming presence of technology – and its surroundings – might seem a bit much, but it's clear that a human touch is being kept in mind."

Still Human

The overwhelming presence of technology – and its surroundings – might seem a bit much, but it's clear that a human touch is being kept in mind. For instance, parts of the show are specifically designed for spontaneity and improvisation; as Haines put it, "The whole show isn't SMPTE'd up as one unit. There are moments that are by the seat of their pants, and they try to preserve that, because they realise there needs to be an element of surprise for all this to work. It's for both their own enjoyment of the show and for the fans to get a live, unique experience."

Ryan Cecil tackles monitors for all three acts – Black Eyed Peas and openers Ludacris and LMFAO – every night.

Keeping the show fresh is a duty that falls on the shoulders of the Peas, but also on Haines, who's been on the road with them for years. Many FOH Engineers have a long history with certain bands, but Haines' goes further back

> "I like to think that I've gotten where I'm at by trusting my instincts both with mixing and with picking the artists that I work with"

than most, since he recorded the Peas' first demos in 1996 as his senior class project in college. The result is that while he helps the act conquer every venue, all those hands in the air are a vindication of sorts for him, too: "I like to think that I've gotten where I'm at by trusting my instincts both with mixing and with picking the artists that I work with, but you don't always expect the world to see the same thing you do. There were plenty of bands to pick for my senior project and plenty of bands to do sound for, but I always saw the spark in them. When 'Where Is The Love' hit in 2003, I thought they'd made it then; now we're in a whole new level of ridiculousness!" AM

INFORMATION

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www.clairglobal.com

Digidesign
www.avid.com

Sennheiser
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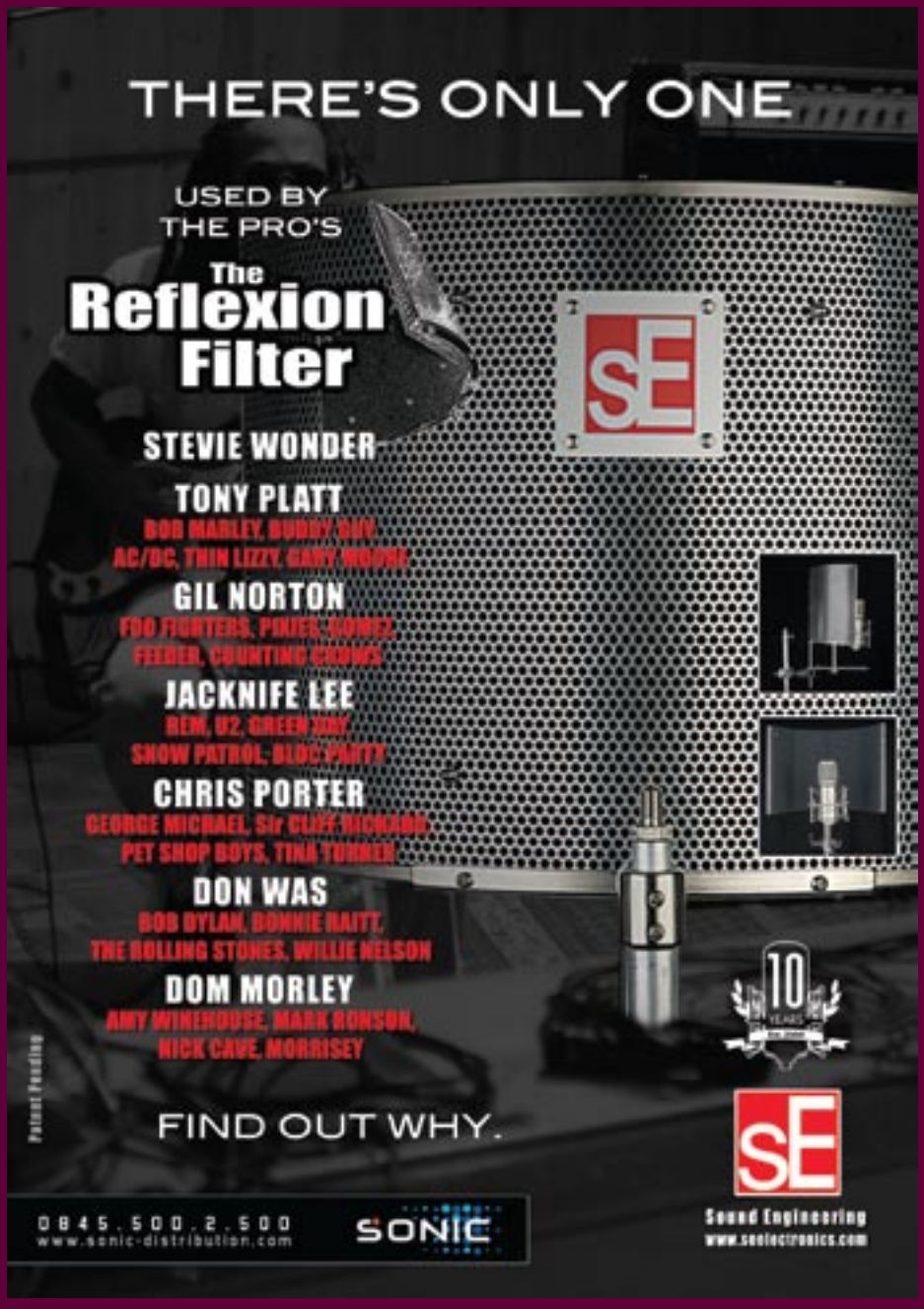

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Rupert Neve Designs
Portico Series Pre Amps

ALAN BRANCH struggles to find anything to dislike in Rupert Neve's Portico range of pre-amps.

Hardware with class, heritage, and professional build quality: we look at the Portico range of mic pres from Rupert Neve Designs, need I say any more? Just the name alone and a glance at the product images makes you want one of these modules. Rupert Neve is synonymous with sound quality, and that is the power of his fame and achievement in excellence of circuit design. His creations have helped many producers and engineers capture, shape, and produce some of the greatest sounding records of our time.

Rupert Neve is now based in the rolling hills of Wimberley, Texas, with his relatively new company Rupert Neve Designs (RND henceforth), and has been designing and building his own products from there. The Portico Series is a series of half rack modules that can be housed in a few ways: either a single module with a half rack join kit, a pair joined together, or several mounted in a special eight space vertical 19-inch rack. Vertical face plates can be supplied for mounting this way, and you can even have a custom cherry wood enclosure for that classic look.

Make no mistake though, as these are Rupert Neve designs of today, not remakes of an old model. As Rupert says himself, "The advances in components and experience gained means the Portico range outperforms the classics in many respects." The Portico modules have a new Rupert-designed transformer, short audio paths, minimal negative feedback, and discrete single sided transformer-coupled outputs to make sure there is no possibility of crossover distortion. What does that all mean? Well, basically it means that the man is back designing vintage sounding modules better than before.

"Make no mistake though, as these are Rupert Neve designs of today, not remakes of an old model."

If you've invested in a quality microphone, nice recording room, and monitoring; but when you turn up your mic amp you're hearing a load of internal hiss, then one of these bad boys is your next step. Here we cover three modules from the Portico range. The 5012 is a dual channel mic pre, the 5015 is a single channel mic pre with a compressor, and the 5032 is a mic pre with addition of three-band EQ. So, you have a few to choose from, but which would you choose if you could only afford one? That's the question I asked myself, and found it was quite difficult to answer.

It's A Personal Thing...

All of the Portico mic amps are identical in each module, so it's purely down to personal choice depending on your normal recording situation and what you prefer. The first impression as you take each module out of the box is the quality of the construction: a vented metal case with a thick face place, adorned with a beautifully detailed colour scheme, superb control knobs, and backlit clear switches. Power is the normal external independent supply that can be the curse of any studio as they grow in numbers hanging behind studio racks, but RND's approach is slightly different in that it has designed the modules to work from virtually any power supply from 9-18 volts that is 'reasonably' clean. This means that the module can be kept running fairly easily in case of a power supply problem, but also it's much easier to use in mobile situations – in fact, a car battery will do. Other manufacturers should take note of this. We could effectively power all of our wall-wart dependant devices from one power source. RND also supplies a power splitter, as each power supply provided with a Portico will ▸

THE REVIEWER

ALAN BRANCH is a freelance engineer/producer and ex-member of the On U Sound Crew. His long list of credits include Jamiroquai, Beverley Knight, M People, Simply Red, Depeche M ode, Shed 7, Sinead O' Connor, Bjork, and Sade. www.alanbranch.com

power an additional module. Whilst the rear of each module is slightly different, all have XLR I/O. The Portico range also has a buss I/O. These are designed for use with other Portico modules with a matching mix or buss input, so a simple TRS patch cord can be used if you add an EQ module to a mic pre, for example.

As each model has the same mic pre, let's firstly have a look at the difference between the modules:

The Portico 5032.

5032 (EQ)

The 5032 is a mic pre with a three-band EQ, including a low and high shelf with a boost or cut 15dB. The high has a switchable curve of eight to 16kHz, also a parametric with EQ and frequency control from 80hZ- 8KHz using a x10 frequency multiplier to cover the ranges of 80-800 and 800- 8kHz respectively, and again a boost and cut of 15dB. Of course in true RND style, it is very musical in its sound and operation. By that, I mean smooth but powerful EQ tools that can sharpen and enhance a natural sound.

5015 (Compressor)

The 5015 has the addition of a compressor, interestingly with its own separate I/O. Its design uses a low noise, low distortion VCA-type to produce a colourless character in its sound. Fully variable threshold, ratio, attack, release, and make up gain controls are well laid out, and an eight-segment LED meter shows gain reduction. A neat feature is the addition of a Feed Forward (FF) or Feed Back (FB) VCA control: FF means the VCA control voltage is taken from the 5015 input before the VCA, whereas FB takes its control voltage from the 5015 output, hence 'feedback'. This was how Rupert Neve's earlier designs were built, having a less accurate but more musical character, so if you want to protect your levels from a dynamic source you can use the fast switching FF, or get creative with the more musical FB to enhance something smoother. There is also a side chain link to enable stereo control or ducking with another matching Portico Module.

5012 (Dual Mic Pre)

The 5012 is simply a twin mic pre amp with separate buss sends. The mic pre is identical on each module. There is a large red mic gain stepped switch from 0 to 66dB of gain in 6dB separations, together with a fully variable trim control of +/-6dB, perfect for riding the input gain when recording extra dynamic material. A high-pass filter green backlit push-in switch delivers a 12dB per octave filter with a variable rotary control covering 20-250Hz. Other backlit switches are the +48v phantom power, a phase invert, mute, a buss/compressor send, and the SILK switch (see below), whilst there is a tiny eight LED segment meter showing the output level. All of the modules employ the use of a Class A operation, which basically means it's the best circuit design for sonic detail and low noise.

Lastly in all of the modules, there is a kind of special boost button that RND has called 'Silk'. Its function is described as, "reducing negative feedback and adjusting the frequency spectrum to provide a very sweet musical performance". A bit like a vintage sound switch, then.

In Use

So for those that have read the opening paragraph and skipped the specs (I of course never do that), and just want to know how it sounds… Well, in short, 'bloody marvellous'. As a mic pre, you just can't go wrong. The transformer design has been evolving for years in Rupert Neve's brain, and his pursuit of sonic excellence is clear if you ever get the chance to hear the man speak (there are some interesting AES audio snippets of him on the RND website for those interested). Use on vocal and guitar was very clear and sharp, and although unfortunately I didn't have a Neve classic mic amp to compare, from memory I would say it was less coloured in its character. I suspect this is why there is the addition of the 'Silk' button, which produces a very contrasting change in the sound, with a smoother top end whilst more low mid becomes present on the recording. I couldn't help myself but leave it in most times, however it does move it away from the clarity of the source sound, which the amp seems to capture in supreme detail. I tried a variety of quality mics to see what difference it could possibly make over an average-quality DAW interface with built-in mic amps, and was amazed to see just how much it did. The level and quality it seemed to draw out of each mic was so much better.

> "The transformer design has been evolving for years in Rupert Neve's brain, and his pursuit of sonic excellence is clear…"

The addition of EQ in the 5032 is a great choice and much like the original Neve1073 mic Pre/EQ. As I mentioned in the detail section, the EQ is smooth and musical as you would expect from RND, and if you're going to EQ when recording, this is the kind of sound sculpturing to use. The 5015 with compression can be a very useful one, especially as it can be used separately in a multi-module set-up. The VCA operation switch 'FF' or 'FB' gives you a choice of two compression modes, and is a lovely choice when recording vocals. I rarely EQ or compress when I record, so dual channel would be my choice. However, having the compressor is handy for those live recordings or places when your recording headroom might be compromised, after all there isn't an undo for a clipped signal! Plus if I had a rack of the 5032 with EQ, that would be perfect for a multi-mic drum recording.

I couldn't really find any faults with the modules. Some might ask for a Digi output, or a dedicated DI, or a full rack, but there are other Portico modules that can do these. I like these modules; they are the Neve classics of today.

INFORMATION

£ Portico 5012 – GB£1,126.09 (exc. VAT)
Portico 5032 – GB£1,213.04 (exc. VAT)
Portico 5015 – GB£1,213.04 (exc. VAT)

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PRODUCT SAMPLER

microphones

There are a lot of microphones out there, for a lot of applications.
To give you somewhere to start from when you're thinking about what microphone to get next, we've pulled a few together in a nice list.

The BP892 MicroSet Subminiature from **Audio-Technica** is an omni-directional head-worn microphone, utilising a 2.6mm condenser capsule. This makes it ideal for applications requiring minimum visibility. It has a high-SPL capability of 135dB, and a flat, extended frequency response of 20Hz-20kHz.

It is available in a wired model as well as in a multitude of terminations to work with A-T and other manufacturers' wireless systems; the wired version features a switchable integral 80Hz high-pass filter.

www.audio-technica.com

Audix offers a range of drum microphones in its Fusion series, including the f6 kick drum dynamic microphone. The f6 has a hyper-cardioid pick-up pattern for isolation and feedback control, and is equipped with an LM Type A (low mass) diaphragm. This model has a wide frequency response of 40Hz-16kHz and can handle sound pressure levels of 140dB, making it a good choice for miking instruments that require extended low frequency reproduction, such as kick drums, large toms, and bass cabinets.

www.audixusa.com

The Valvet X, from German manufacturer **Brauner**, was released to celebrate the Valvet's 10th anniversary. A tube microphone with an equivalent noise of 9dBA, and a frequency range of 20Hz to 22kHz, the Valvet X is a cardioid-only model of the Valvet, which was itself a descendent of the VM1 tube microphone. Offering a maximum SPL of 142dB, its intimate, pure sound would suggest that it is best for vocals or acoustic instruments.

www.brauner-microphones.de

Audio Technica has added its first ever ribbon microphones to the 40 series microphone range. The AT4080 features dual ribbon construction for pronounced sensitivity, while the single ribbon AT4081 is a low-profile stick design that allows for flexible positioning options. Both the phantom-powered models employ powerful N50 rare-earth neodymium magnets, and have a figure-of-eight polar pattern. Traditional ribbon mic problems, such as fragility and low output, are tackled through the use of a proprietary MicroLinear ribbon imprint.

www.audio-technica.com

If the M88 from **Beyerdynamic** just isn't personal enough, users can now design their own version. The base model is the hyper-cardioid M88 TG, with four design areas available. Retrospect offers a traditional design with a hand sewn leather shaft and the option to emboss a name; Midnight is all black, and can be made in platinum with a black diamond; Spectrum has colours determined by the artist's date of birth; and Gradient has a voice print on it based on a sample of the customer's voice.

www.my-88.com

The **CAD Audio** E100S large diaphragm supercardioid condenser has a low noise floor of 3.7dBA, an 80Hz hi-pass filter, and a 10dB pad. CAD says that the Quadra-FET front end delivers high sensitivity and low distortion, with high performance from the proprietary circuitry. Accurate phasing on instruments is delivered by the nickel plated one-inch capsule, as well as a rich vocal tone accentuated by the extended low frequency response. It comes with a vintage woodgrain cherry case and a stealth shock mount.

www.cadaudio.com

The new versions of the **AKG** C 414 offer nine pick-up patterns, and all controls can now be disabled easily. Both microphones have three switchable bass cut filters as well as three pre-attenuation levels that allow lead vocals and solo instruments to be placed in very dense mixes. The C414 XLS maintains the sonic character of longest-lived C414 model, the C414 B-ULS, while the C414 XLII is the successor of the C414 B-TLII, with the sonic signature of the AKG C-12.

www.akg.com

Blue has expanded its enCORE live stage microphone series with the addition of a rugged instrument microphone, the 100i. It has a new dynamic capsule with a custom-tuned diaphragm designed specifically to provide a tighter polar pattern perfect for miking instruments and other sources requiring high isolation. A custom circuit with transformer and high-pass filter optimises frequency response for use with drums and amplified instruments, while a specially designed grille provides protection and facilitates mounting in tight spaces.

www.bluemic.com

The CAD22A dynamic microphone from **CAD Audio** offers a frequency response of 60Hz to 15KHz, and a uniform cardioid polar pattern that reduces feedback. Aimed at vocalists and musicians looking for a general purpose model, the CAD22A can give a warm bass-boost by working close to the microphone. It comes with a swivel mount, on/off switch with recessed button, an effective internal multi-stage blast filter to minimise wind and breath noise, and an effective rubber shock mount to reduce cable, stand and handling noise.

www.cadaudio.com

C 414
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Two Legendary Sounds

C 414 XLS

- delivers the well-known C 414 Sound - for any application
- well-known as the most universal and versatile large diaphragm microphone ever
- accurate, beautifully detailed pickup of any acoustic instrument

C 414 XL II

- delivers the unique sonic signature of the highly sought after AKG C 12
- enables lead vocals and solo instruments to be placed, even in a dense mix
- unrivalled up-front sound also for classical music recording or drum ambience miking

Since the mid-1980's, the C 414 has been THE reference microphone of the recording industry and a proven workhorse for the stage. The new C 414 models offer nine pickup patterns that enable you to choose the perfect setting for every application. For live-sound applications and fixed installations, all controls can be easily disabled for trouble-free use, and the peak hold LED displays even the shortest overload peaks.

ADV 6971/1/E

www.akg.com

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AKG SOUNDS BETTER

DPA's 4099 series of condenser clip microphones for instruments can be used with almost any wireless system through the use of an extensive adapter system, and can also be used as a standard 48V phantom powered microphone via the included XLR connector. The 4099G is designed for the guitar family, fitting instruments with a body depth of between 1.4-4.8 inches. It features a gooseneck for stable and repeatable positioning, and can be unclipped and repositioned or moved to another instrument with one hand.

www.dpamicrophones.com

The **Horch** RM2J is a unique tube microphone design, featuring Horch's four-micron capsule. The microphone is switchable between fixed cardioid mode (red) and multi-pattern (blue), using a switch on the front of the microphone. There is a cardioid pattern available in the multi-pattern mode, which has a different sound and texture to the fixed cardioid pattern of the red mode. Switching to red turns off the rear diaphragm element of the microphone, creating a wider cardioid response pattern and enhanced proximity effect.

www.horchaudio.de

The engineers at **Mercenary Audio** saw a need for a microphone that would behave like the increasingly old, expensive, and difficult to get hold of Neumann KM-84i, and so developed the KM-69. The sound of the microphone – designed particularly for hi-hats – was created over time solely by listening and using, and was designed to a particular aesthetic rather than a set of numeric specifications. The KM-69 is also useful for drum overheads and other percussion, acoustic guitar, and piano.

www.mercenary.com

The **DPA** 5100 is a mobile surround microphone that can be used to add surround ambience – ideal for giving a full surround sound to sports events. No external signal processing is required, and the microphone can be mounted on a camera or a microphone stand, suspended, or handheld via a hand grip. The 5100 employs five miniature pressure transducers that have very low sensitivity to wind and mechanical noise, low distortion, consistent low frequency response, and a large dynamic range.

www.dpamicrophones.com

JZ Microphones released the V47 at the end of last year as the first in its JZ Vintage series. The microphone is based on the capsule sound of the legendary U47. It has an original, flask-shaped design with a built-in shock-mounting system and swivel mount. The double diaphragm capsule was created using JZ patented Golden drops sputtering technology, in which the Mylar diaphragm material is coated with precisely-located discrete dots of gold alloy. The microphone has a fixed cardioid pickup pattern.

www.jzmic.com

The M990 art is a large diaphragm tube microphone made by German manufacturers **Microtech Gefell**. The pressure gradient transducer uses a gold-sputtered PVC membrane, and the tube amplifier is a low noise pentode valve operating in a triode configuration. The 'art' edition is a special anniversary edition of the M990; the original M990 capsule uses a Mylar diaphragm, whereas the new edition uses a PVC-diaphragm version of the M930 capsule. It also features a custom output transformer.

www.microtechgefell.de

The Drum Periscope tom and snare microphones from **Earthworks** feature a stiff mini-gooseneck that will not move when drums are hit hard, and microphone capsule housing that will withstand a direct hit from a drumstick. The DP25/C is a cardioid microphone for the snare that has a frequency response of 50Hz to 25kHz, and a short diaphragm settling time. The DP30/C tom microphone has a frequency response of 30Hz to 30kHz. Both models feature a very fast impulse response.

www.earthworksaudio.com

The Oceanus LT-381 from **Lauten** is a transformer-less microphone that utilises Lauten's new 31.25mm dual-diaphragm capsule. Featuring a variable polar pattern selector that allows users to choose from omni-directional, cardioid, and figure-of-eight, as well as six intermediate positions, the LT-381 has a wide variety of sound characteristics. The capsule is internally shock-mounted, and each microphone has a custom heavy-duty shock mount. The microphone contains a NOS pentode tube as the input and gain stage, and a transformer-less tube output stage.

www.lautenaudio.com

The **MicW** G106 is an omni-directional microphone that uses a 26mm diameter large diaphragm capsule. It has the same design as the MicW N101 microphone, but it uses a gold-plated polymer diaphragm. The G106 offers a frequency response of 20Hz to 20kHz with a 0-2dB soft boost at around 8Hz. It has a totally transparent audio path with a low noise floor of 24dBA and an SPL handling capability of 130dB SPL peak.

www.mic-w.com

The H2-5.1 surround microphone from **Holophone** comes equipped with Sennheiser MKE series microphone capsules. The multi-directional H2-5.1 is based on the company's flagship H2-PRO, and features six Sennheiser microphone capsules arranged to correspond with a typical 5.1 speaker set up. This configuration should allow the microphone to capture an accurate 5.1 surround recording, from a single point, with no signal manipulation required. The microphone's six channels of audio are output to six separate XLR connectors.

www.holophone.com

Manley's Gold Reference Stereo microphone utilises its own design of large capsules – 1.25-inch overall, with a one-inch diaphragm diameter. It has two complete matched systems installed in one case with the upper capsule being fixed and the lower capsule being continuously rotatable through 90 degrees. Each capsule has its own continuously variable pattern control and individual -10dB pad switch. The all-tube electronics are built around two triodes in cascade forming an entire gain-block. The grille is a very open weave stainless-steel.

www.manley.com

Similar to the TLM 103, but 13 percent smaller, the Neumann TLM 102 is aimed at home and project-based recording studios, smaller broadcast facilities, and travelling musicians. It has a maximum SPL of 144dB, and a slight presence peak of 6kHz. The microphone is 166mmx52mm, and has a foam-lined grille which reduces harsh sounds and eliminates the need for a pop filter. The elastically mounted capsule reduces the sound of structure noise without the need for a shockmount.

www.neumann.com

The **Rode** M1-S is based on the sturdy Rode standard M1, with the same heavy duty metal body. The big difference is the addition of a fully lockable on/off switch, but otherwise the M1-S offers the same high-output neodymium capsule and feedback-rejecting pick-up pattern as the M1. The M1-S also features a lockable XLR output, to provide extra security in public venues and institutions. The tough live performance dynamic microphone has a frequency range of 75Hz to 18kHz.

www.rodemic.com

Sanken's CU-44X MkII has a specially designed two-way capsule, one for the bass and one for the high frequencies. Using dual titanium diaphragms, the microphone provides a transparent and high-resolution sound. It also features a capsule mounting system that ensures phase coherency between the two capsules. The titanium membranes of the CU-44X MkII are immune to the effects of humidity and temperature change, resulting in a consistent response regardless of the recording environment. The phantom power supply is housed within the body of the microphone.

www.sanken-mic.com

sE Electronics' sE4400a is based on the same capsule tuning as the sE2200a, but with a dual capsule. The microphone has four polar patterns – cardioid, hyper-cardioid, figure-of-eight, and omni. It has two bass cuts at 60Hz and 120Hz, and two pads at 10dB and 20dB. The compact chassis houses a twin diaphragm one-inch capsule, and the flat, round-edged design allows it to be used flat on a drumhead or guitar cab, or pushed through the skin of a kick drum.

www.seelectronics.com

Royer claims that the R-122 is the world's first phantom powered active ribbon microphone. It contains a fully balanced, discrete head amplifier system that utilises a specially wound toroidal transformer and ultra-low noise FETs. The R-122's proprietary offset ribbon transducer is the first of its kind, positioning the ribbon element closer to the front side of the microphone. This arrangement gives the ribbon more room to move within the prime magnetic field while maintaining full frequency response during high SPL recordings.

www.royerlabs.com

Schoeps has recently unveiled the SuperCMIT, a digital shotgun microphone with increased directivity, based on Schoeps' CMIT 5 analogue model. Excellent in situations where diffuse sources of noise might interfere with a recording, the SuperCMIT greatly reduces unwanted noise. The SuperCMIT's digital signal processing recognises sound energy arriving from different directions, and determines whether that sound has a discrete, persistent direction of arrival or not, using that information to suppress diffuse sound and focus on discrete sound.

www.schoeps.de

The **sE Electronics** sE4 is a remodelled sE3, and will replace that model. Designed to sound and perform exactly the same as the sE3, the sE4 has one key difference; the chassis has been re-engineered to accept two additional interchangeable capsules, a hyper-cardioid and an omni. It comes with the cardioid capsule as standard, and the hyper-cardioid and omni capsule set is available as an additional purchase for both single and matched stereo pair sE4 microphones. The new capsule set will not fit the sE3 model.

www.seelectronics.com

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.....Jono Buchanan, Future Music

"The Horizon definitely sounds far more expensive than it really is, with that typically rich character, that most would associate with traditional quality valve mics like the AKG C12 or Telefunken 251, and the fact that I'm even comparing the Horizon to mics of that calibre says a lot."
.....Hugh Robjohns, Sound On Sound

"In a world full of clones and wannabees the LT-381 Oceanus is a new voice in an otherwise crowded field of mediocre pretenders. Try this microphone on your favourite singer and I guarantee you will not be disappointed."
.....Douglas Grean, Producer/Engineer (Velvet Revolver, Stone Temple Pilots)

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or call 01923 693770 to arrange a demo

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The MKH 800 TWIN from **Sennheiser** is a universal studio condenser microphone, which includes a dual capsule consisting of two symmetrical push-pull transducers with high linearity. It is a side fire microphone with the two cardioid pick-up patterns of the transducer aligned back-to-back across the axis of the microphones. The signals of both transducers are not combined in the microphone in order to generate differing pick-up patterns, but are available seperately as two channels at the microphone output, allowing the patterns to be remotely adjusted.

www.sennheiser.co.uk

The retro-styled Saturn from **Sontronics** is inspired by the classic vocal microphones of the 1940s and 1950s. Designed with vocals in mind, but with a choice of polar patterns plus filter and pad controls, it is a flexible studio microphone that can be used on guitars, brass, woodwind, strings, piano, and drums. It has five polar patterns – omni-directional, sub-cardioid, cardioid, hyper-cardioid, and figure-of-eight, variable attenuation of -10/-20dB, and a high-pass filter.

www.sontronics.com

The SPS200 Software Controlled microphone from **Soundfield** is suitable for those working in broadcast: in the field on laptop-based recording systems, or in the studio on fully-fledged DAWs. It is powered by 48v phantom power and incorporates four low noise condenser capsules. A short break-out cable outputs the four signals generated by the SPS200 at mic level on four balanced XLRs, ensuring compatibility with all equipment. All processing takes place in the supplied Surround Zone software.

www.soundfield.com

Shure's PG27USB is a side address condenser microphone, which easily plugs into a computer USB port for digital recording. Designed with a flat frequency response, the microphone naturally reproduces a wide variety of acoustic, amplified, and vocal sound sources. It is compatible with Windows Vista, XP, 2000, and Mac OS X (version 10.1 or later). The model has an integrated pre-amp with microphone gain control to allow control of the input signal strength, and zero latency monitoring.

www.shure.com

The **Studio Projects** CS5 is an externally polarised five-pattern pressure gradient transducer microphone, with FET impedance converter. It has a 27mm capsule and features five selectable polar patterns, four selectable pads, four high pass filters and four low pass filters. Studio Projects recommends it for use in close miking of instruments with high sound pressure levels; as a spot mic for wind instruments, strings, percussion, and guitar amp; vocalist recording; or as an announcer's microphone for broadcasting or dubbing.

www.studioprojectsusa.com

The Black Knight from **Violet** is based on a dual-diaphragm large-size true electrostatic capsule, providing a fast transient impulse response, minimum sound colouration, good low frequency response, and competent handling of low sound pressure levels. The Black Knight has a unidirectional cardioid polar pattern, with a wide frontal incidence angle. The microphone head can be positioned without stand adjustments due to an integrated head swivel mount, and the head-grille is made of brass mesh to provide a very open acoustic filter.

www.violet-design.com

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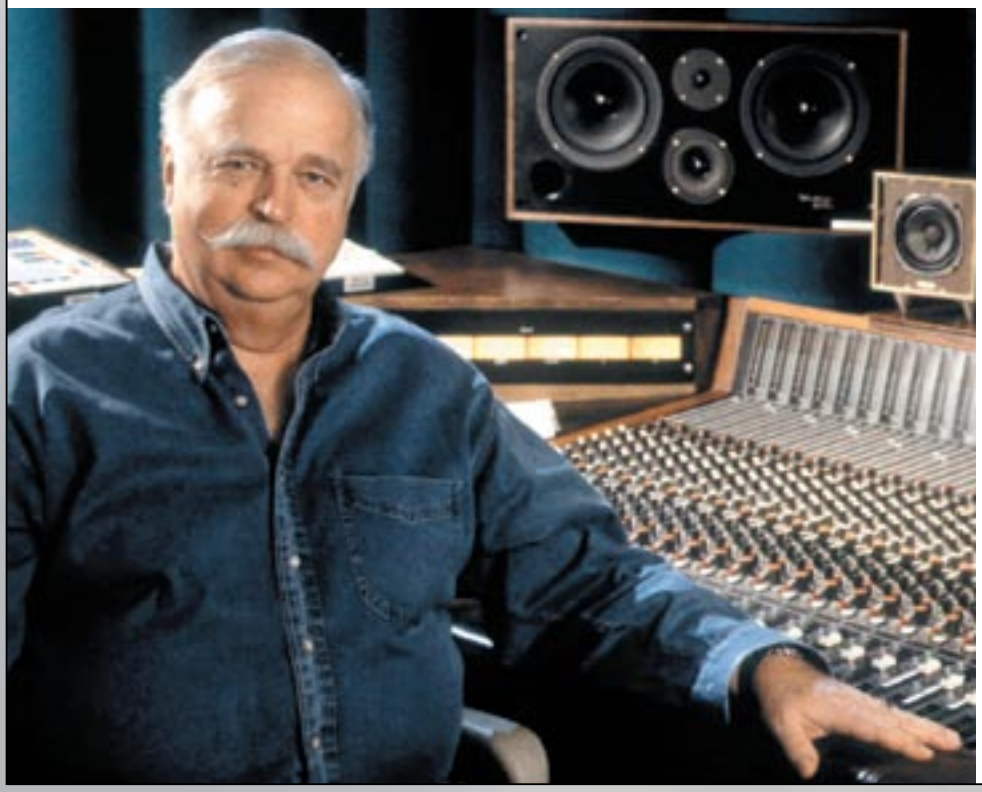

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Colour Grading Part 3

KEVIN HILTON continues with the Telecine tour...

GLOSSARY

Perforation/perf

As evocative as celluloid, perforations are the small punched holes that run on either one or both sides of a piece of film. These work with sprocket wheels to allow film to be passed through cameras, projectors, telecine machines, and other processors. The layout of four perforation holes on 35mm film was first used by the Edison Company. This arrangement is sometimes called the American perforation but more usually referred to as 4-perf. Negative 35mm film has rectangular holes arced at the corners, known as Bell and Howell or negative perforations. Because of their construction these holes can tear through over-use, so the perfs on positive film are rectangles with curved corners. This is called the Kodak standard (KS) or simply positive perforations. The 4-perf method is good quality but takes up a lot of space on the film. 3-perf 35mm was introduced to give 25 percent more room, making for an economical shoot as well as providing extra image area. A third configuration, 2-perf, was introduced in 1963 for the Techniscope widescreen format. Despite being used on Sergio Leone's *Once Upon a Time in the West* (1969) and George Lucas' *American Graffiti* (1973), the process fell out of favour because the pictures had to be blown up for projection, producing results that film doyen Leslie Halliwell described as 'awful'. The process has come back in favour recently for low budget widescreen shoots; it was used on the critically acclaimed *Hunger* (2008), with a three times bigger picture in the 2.35:1 format.

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Final Color website: www.finalcolor.com/history4colorists.htm
History of the Zeiss company: http://people.ischool.berkeley.edu/~buckland/television.html

The telecine (TK) machine is among the most successful pieces of post-production equipment, allowing film footage to be transferred to video for colour correction and general creative manipulation. Despite the ingenious concept, there was the feeling that being based on a cathode ray tube flying spot mechanism, telecines were not the most efficient of devices.

Despite leading manufacturer Rank Cintel championing and making a great success out of the CRT telecine, it was inevitable that chip techology would be applied to this area. Just in the same way camera developers began to move away from valves and embrace CCDs (charged coupled devices), so manufacturers looking to break Cintel's dominance of the TK market began to investigate solid state technology.

Let There Be Line Array

The first CCD line array telecine appeared in 1979. Developed by the Fernseh (the shortened form of Fernsehapparat, the German word for 'television') division of the Robert Bosch corporation, the FDL (Film Digital Line)-60 is significant for several reasons. Its use of solid state circuits was a major step forward in film transfer, but the influence and afterlife of the FDL-60 is perhaps the most compelling aspect of this machine.

Bosch's TV operation dates back to the formation of Fernseh AG in June 1929. This was a joint venture between Robert Bosch AG of Stuttgart; Loewe Radio GmbH of Berlin; Baird Television Limited of London; and Zeiss Ikon AG of Dresden. John Logie Baird had not only laid the foundations for television but also invented the telecine machine in 1938. Annoyed at the lack of enthusiasm shown for TV by the BBC at the time, Baird collaborated on a series of experiments involving a flying spot scanner with the German Reichspost.

Baird found more acceptance for his innovations in Germany and Fernseh provided a vehicle for further development. Bosch took total control of the company in 1939 and it continued as the parent group's TV division, with a few name changes, into the 1970s. In 1979 Bosch and Telemation, a subsidiary of Bell and Howell, formed a joint venture called Fernseh Inc.

This arrangement was short-lived; three years later the German partner bought out Telemation and renamed the TV venture Robert Bosch Corporation, Fernseh Division. Bosch continued to seek partners to share development of its camera and telecine products, and in 1986 it began working with Philips – the two companies forming Broadcast Television Systems (BTS).

Bosch eventually gave up on what had been Fernseh in 1995, passing all control and ownership to Philips North America. The division was renamed yet again, this time as Philips Broadcast Digital Video Systems (DVS). As both BTS and Philips DVS the company pushed forward the use of CCDs for both cameras and telecines; in the field of TK it succeeded in wresting a large proportion of the market from Cintel and its flying spot systems.

Splitting Up

CCD machines use a halogen lamp with a variable density filter as the light source. White light is shone on to exposed film with a prism for splitting the composite colours into red, green, and blue (RGB). Image data is read by a three line-array of CCD chips, one for each component colour of RGB. The chips detect one line of video at a time and, after processing, the final signal is fed into a frame store, where it is broken down into fields. From here the chain progresses to a colour corrector, with a DVE added for manipulation of the output (as opposed to flying spot machines, where zoom, pan, and rotation are integral functions).

Flying spot and CCD telecines perform the same task – scanning motion picture film and translating it into electronic signals that can either be used as television images or recorded on to video tape – but they do this in very different ways. The difference in methods – coupled with the traditional mistrust of solid state by those loyal to tubes, and the converse dislike of older technology by those favouring chips – initially restricted CCDs to working on specific types of material.

Flying spot was generally considered more suitable for transferring and grading drama productions as it gave a warmer look to the images. CCD was seen as harder, producing pictures that looked more like videotape than film. Even into the late 1990s this perception continued to limit chip-based telecines to being used for commercials, music videos and, as digital became more established, transferring images as data. Graders at the time sometimes found that customers would go to another facility if a post house they had been using moved to CCD telecines.

Snobbery And Flirtation

Despite this technological snobbery CCD was soon established in telecine, influencing newcomers to the field and even tempting bastions of older technology to give solid state a try. Cintel flirted with it in 1982, producing the ADS machine, while Marconi produced the B3410 three years later. Marconi sold 84 machines over three years, some of which are still out in the market today.

The pioneers of CCD telecines were encouraged by the response and pushed on with development. The FDL-60 was upgraded during the 1980s; and where the original machine had a single line receiver array, the FDL-60A featured three CCDs for reading images. The B model, appearing in 1982, had additional features, while the C, released in 1987, used Fairchild 134 CCDs, replacing the 133s used in the A, and a 24 volt light.

The FDL-60 and its variations offered colour control but it could be connected to a colour correction workstation for finer manipulation of images. A further option was the FDGR-60, claimed to be the first all-digital noise/grain reduction unit on the market. Bosch went further by developing a grading system to run with the FDL-60. The FRP-60 allowed graders to colour correct scene by scene.

Some of the development of the FDL-60 was carried out in collaboration with Philips under the BTS banner, but the first product produced from scratch by the joint venture did not appear until the beginning of the 1990s. The FDL-90, which evolved into the Quadra in 1993, handled

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"We use lots of Radial products on the Linkin Park tour. Sonically Radial DI's are superb and the build quality has proven to stand up to the road. I love my Radial gear!"

~ Kevin 'Tater' McCarthey
(Linkin Park, Kid Rock, Brian Setzer, Megadeth, Motorhead, Godsmack)

"In all my years, I've never used a DI that sounded this good and solved problems this easily. Radial DIs are head and shoulders better than anything I've used."

~ Jeff Warell
(FOH - America, Pat Benatar, Fleetwood Mac, Edgar Winter)

"The Radial SW8 auto-switchers have saved the show on more than one occasion. They have proven instant and seamless."

~ Richard Young
(Production Manager - Radiohead, Pink)

"The Radial Duplex is musical and transparent... and with me everywhere I go. Thanks Radial for a superior product!"

~ Tom Coster
(Santana, Joe Satriani, Larry Coryell)

JDX™ amp & cabinet DI
"Perfect guitar tone every night"
The JDX Reactor captures the signal from the head and the back impulse from the cabinet for consistent guitar tone night after night. The perfect solution for in-ear monitors!

JDI Duplex™ stereo direct box
"The Swiss Army Knife DI"
Hit it hard and the JDI Duplex smoothes out the digital edge to deliver a smooth natural tone. Ideal for digital piano, drum machines and just about anything else you can toss at it.

Twin-ISO™ line isolator
"Look Ma... no hum or buzz!"
Connect the Twin Iso between any two balanced devices and get pure signal - no noise. Jensen™ audio transformers with better than 22dB of signal handling. Loud and clean!

SGI-44™ studio guitar interface
"Happy Artist = Happy Crew"
The SGI-44 lets you connect the electric guitar to the amp, tuner and PA system without loading the pickup. Connect it to the Radial JX44 Air Control for smiles all around!

J+4™ balanced line driver
"Like power steering on your car"
The Radial J+4 takes consumer level devices and kicks out enough gain to drive your power amp into clipping. Clean, transformer isolated circuit with 100dB of dynamic range.

JPC™ laptop DI
"Laptops are not made for audio"
Computers generate tons of noise and have terrible filtering. The Radial JPC comes to the rescue with transformer isolation and buffers to eliminate PC noise for good.

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Colour Grading: Part 3

news

Cintel International expanded its range of film scanners and image processing products at this month's NAB Convention with the introduction of the diTTo evolution 2K/4K scanner and imageMill2 restoration system.

The diTTo was developed as a high quality, affordable data scanner, and made its first appearance on the market in 2005. The evolution version takes the original system as its foundation, with features including the D/SCO (dust/scratch concealment) restoration-cleaning tool and a user interface familiar to operators. Among the new features are a modular structure that can be easily upgraded, faster shuttle speeds, an archive scanning mode that does not require a personal identification number (PIN) for operation, a 3.2D density capability, and imageMill2 for image processing work.

Cintel's Sales Director, Simon Carter, comments, "At NAB 2010 we are very excited to be presenting new workflows for film scanning and image restoration. DiTTo evolution is the first film scanner to be instantly switchable from PIN registration to non-PIN registration, and also the first to include film grain measurement and image stabilisation tools. It is the ideal film scanner for all applications and stock types, from OCN [open computer network] ingest for digital intermediates to dense print for restoration work."

Business Development Manager Simon Clark comments that diTTo evolution is suitable for a range of film scanning and post-production applications: "It can evolve from a simple to use, calibrated PIN registration scanner for digital intermediate (DI) use to a multi-format, non-PIN registration machine for shrunken and damaged film, offering a full set of image restoration tools."

The imageMill was designed as a multi-standard platform and the new version of the system has additional networking and data management features. "ImageMill2 will address the industry's need for an all-in-one, fast but simple to use noise and grain management tool for both data-centric DI applications and restoration projects." The unit can operate at speeds of up to 25 frames per second (fps) on 2K and HD files, with 4K material processed at 10fps. SD footage can be dealt with at twice real-time.

ORIGIN, a new D/SCO due to be launched later in the year, was also on show during NAB, along with the established GRACE noise and film grain management and STEADY real-time stabilisation systems.

SPOT THE DIFFERENCE
The picture on the right shows the Holophone H3D 5.1 surround sound microphone. Equipped with 5 DPA capsules it is now available for hire from Richmond Film Services for £40 a day. The picture on the left shows a toy dinosaur.*
For more information on the Holophone microphone call us on 020 8940 6077, or you can visit our website at www.richmondfilmservices.co.uk.
RICHMOND FILM SERVICES
*We do not hire toy dinosaurs

Super 35mm, Super 16mm, and Super 8 film, and produced a 4:4:4 digital video output to feed grading workstations. Like most telecines the FDL-90/Quadra was switchable between PAL and NTSC; previous FDL machines were either one or the other, with SECAM versions also available, although a few multi-standard models were produced. Both included a switch function to accommodate both 3- and 4-perf film (see glossary). Fairchild 181 CCDs were used in both the FDL-90 and Quadra, so the main difference between the two was upgraded electronic circuits in the latter machine, along with the capstan being fitted nearer to the film gate.

A False Diagnosis

By the mid-1990s the cinema and broadcast industry was realising that although film was not dead – and perhaps not even terminally ill – technology and the times had moved on. There were growing demands for more efficient ways of transferring and post-producing material, which led to the coining of the dreaded phrase workflow. High definition was becoming a reality and this meant film images were being thought of more in terms of data.

Just before taking complete control of BTS, Philips began working with Eastman Kodak, which, during the late '80s and early '90s, had been developing a digital cinema system. Using Kodak's scanning and CCD expertise and BTS' experience in TV and TK, the world's first HDTV telecine was produced. The FLH-1000 was tested in a US post house but never got to market.

Its place in telecine history is assured, though, because after Philips took complete control of BTS the research relationship with Kodak continued, resulting in the SDC 2000, better known today as the Spirit datacine. By the late '90s data was having a profound influence on how material of any format was transferred and how graders did their jobs. The Spirit and Cintel's C-Reality were at the forefront of datacine development, but computer technology was ushering in new forms of film recording and colour manipulation systems.

The traditional telecine was still an important piece of equipment at that time and its influence continues today, even if the way material is dealt with is changing rapidly. Next month's Video Guide will look at the technical background of how images are processed in TK work and the introduction of the first specialised colour correction workstations.

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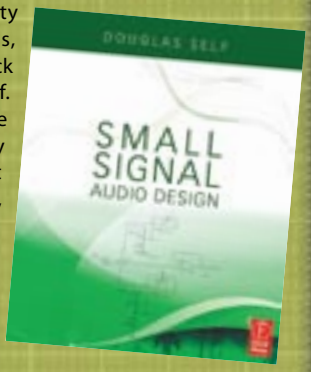


Those of you who want to design high-quality circuitry for pre-amplifiers, mixing consoles, and other signal-processing devices could pick up Small Signal Audio Design by Douglas Self. Published by Focal Press, the book is a resource that will help you use inexpensive and readily available parts to obtain state-of-the-art performance in parameters of noise, distortion, crosstalk, and other areas. Focusing mainly on pre-amplifiers and mixers, the handbook offers an extensive repertoire of circuits that can be put together to make almost any type of audio system. It includes a chapter on power supplies, keeping costs down, and showing how to power everything. Self has a background in design for manufacture, and claims to have dedicated himself to demystifying amplifier design and establishing empirical design techniques based on electronic design principles and experimental data. He is a regular contributer to *Electronics World*.

www.focalpress.com

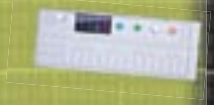
fat/SP3LL1NG

You know the feeling. You've been watching that lovely piece of vintage equipment on eBay, thinking of putting in a bid and then it gets to the last few minutes of the auction – and the price shoots up into the stratosphere. How do other people get those fantastic bargains? Some of them might be looking at Fat Fingers, a website that takes advantage of orthographically challenged listers by searching for items listed on eBay with spelling mistakes. So you might be able to bid on a nice cheap consloe or cabel that nobody else has been able to find.

www.fatfingers.com

t1ny/DANC3R

Synthesisers. They're so big and heavy, aren't they? If you have found yourself wishing for one you could just stick in your pocket, then the OP-1, being developed by Swedish company Teenage Engineering could be the very thing. It is 292mm wide with a height of 102mm and depth of 13.5mm - so very small indeed. The funky-looking little gadget has a built-in tape recorder with a beat matching features that allows you to sync tape speed to the internal sequencer. Everything is colour-coded to match the loop graphic on the AMOLED display. It also functions as a sampler and controller - connect it to your computer and control your DAW with the common play, stop, rec, forward and rewind. When plugged in to the mini-USB port the OP-1 will show up as a mass storage device, allowing you to drag and drop audio files between your computer and the OP-1. Sampling can be done using the built-in microphone or line-in jack, and the sampler automatically maps your recorded sample across the keys. The device has a durable painted aluminium body and no visible screws. The team from Teenage Engineering say that it will also have a wireless sync feature.



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CLEAN UP YOUR ROOM!

Introducing the London 12A Room Kit

Problems Solved!

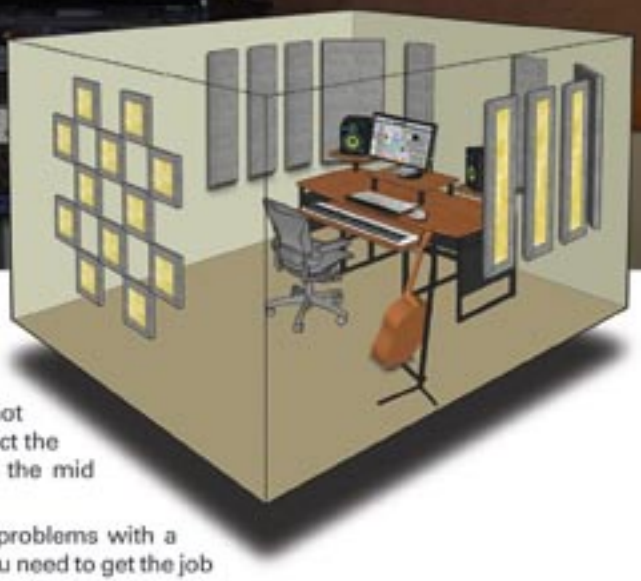
"When Brian Moncarz and I were setting up Rattlebox Studios, we had rooms that were basic rectangles. We wanted to keep the aesthetic of the room, such as the red brick and hardwood floors but tune the room to an international standard.

I turned to Primacoustic because I was familiar with their product from being in studios I had worked at. We purchased MaxTraps, FullTraps and Broadway acoustic panels and even though I am a bit of a novice when it comes to construction, I was able to easily install most of the units myself. They have dramatically changed the sound of the room for the better. I've just recently got the last bass trap in place and the panels have controlled the reflections in the room perfectly.

I love mixing in our room now. Mixes translate really well to my home listening room and especially the car. We also have Broadway panels in our vocal booth along with the Cumulus corner traps. They took the honk out of the room without adding that boxy sound you can often get with other room treatment. Listening in the room now is a pleasure and I can work for hours without over fatigue."

~ David Bottrill

3-time Grammy winning Producer/Engineer
King Crimson, Staind, Silverchair, Godsmack, Peter Gabriel, Kid Rock, Joni Mitchell, Mudvayne, Dream Theater, Tool.



It's all about balance...

Would you mix a record using a monitor with a blown speaker? Not likely. The same applies to acoustic treatment. You cannot simply absorb the high frequencies and expect the results to be balanced. You need to control the mid range and the bass too.

The London 12A room kit solves all of the problems with a complete package that includes everything you need to get the job done right. Scatter Blocks™ tame flutter echo while retaining a sense of air. Control Columns™ handle the powerful mid range and primary reflections. Broadband corner traps reduce standing waves and manage bass. And to top it off, it is a spectacular value.

And we are not talking low density, low performance foam that just barely treats the highs. This is the real stuff! Each Primacoustic Broadway™ panel is made from 6lb per-cubic-foot high density fiberglass, encapsulated in micromesh and then covered with acoustically transparent fabric. You get the same look and performance that real studios insist upon at a fraction of the price.

The Primacoustic London 12A Room Kit...
balanced sound absorption, attractive finish, easy to install.

Problems solved!

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